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WE intended, at first, to have drawn up a short biographical account of the late Dr. Wistar, for this number of the Recorder. This, however, being put off for the present, we offer to our readers a short eulogy on the character of this distinguished and lamented physician. It was delivered in the hall of the college of physicians and surgeons of New-York, by professor Hosack, on the morning of Dr. Wistar's funeral. If it should be thought not to be as comprehensive and satisfactory as might be wished, it ought to be considered, that the time allowed Dr. H. for the preparation and performance of this mournful duty, was but a few hours.—EDITORS.

Tribute to the Memory of the late Caspar Wistar, M. D. Professor of Anatomy, &c. in the University of Pennsylvania, President of the American Philosophical Society for the Promotion of Useful Knowledge, &c. By his friend, David Hosack, M. D. Professor, &c. in the University of the state of New-York.

Gentlemen, Students of Medicine,

BEFORE I enter upon this day's discourse, allow me, in compliance with your request, and in the indulgence of those feelings,

which a long and uninterrupted friendship has produced, to call your attention for a few moments to the painful subject that suspended our exercises on the day of our last meeting.* By the death of the celebrated professor, whose loss we lament, not only the city of Philadelphia, the scene of his labours and usefulness, not only the university of Pennsylvania, of which he was a distinguished member, have reason to mourn; but his loss is one of a national character, in which we all participate, and which will be lamented in every part of our land, to which the benefits of medical education have been extended: for there are comparatively few of the physicians of our country, at this time in the practice of their profession, who have not been indebted to him for their instruction in that department of medical education, in which he so eminently excelled.

Although we are not permitted to join in the solemn assembly, that will this day be convened to attend his remains to the tomb, let us unite with his numerous friends in the indulgence of those painful feelings which his premature and unexpected death has occasioned, and call to our remembrance some of the most important events of his life, some of the great features of his character, that have given value to his name, and reflected honour upon our country. Such, and so numerous were his virtues, so extensive were his literary and professional attainments, and so distinguished was his career of usefulness, that we are naturally led to trace the progress of that mind, that has been capable of effecting so much for the benefit of his fellow men.

Dr. Caspar Wistar was a native of that city, which he adorned by his learning, and enriched by his labours: he was born in the year 1760: his parents were of German extraction, and belonged to the society of friends, of which they were highly respected members.

Dr. Wistar received his elementary education at the celebrated

* Professor Wistar died in Philadelphia on the morning of the 22d of January, 1818; the afflicting intelligence of his decease reached New-York on Saturday morning, the 24th.

grammar school that had been originally established in the city of Philadelphia, by William Penn. At that seminary he received an excellent English and classical education, the institution being at that time under the direction of Mr. John Thompson, an eminent scholar, and very able teacher of the Latin and Greek languages, and now a respectable merchant in the city of Philadelphia. With the preparatory knowledge thus acquired, young Wistar resolved to study medicine as the business of his future life: for this purpose he entered as a private pupil of the late Dr. John Redman, then one of the most eminent practitioners of physic in the city of Philadelphia. While he was thus acquiring the advantages of much practical information in the office of his preceptor, he also diligently availed himself of every opportunity of instruction that his native city then afforded, by attendance upon the medical lectures of Drs. Morgan, Shippen, Rush, and Kuhn.

Stimulated by the success and distinction which those eminent teachers and practitioners of medicine had derived from a visit to Europe, and an attendance upon the celebrated schools of Leyden, Edinburgh, and London; always animated by the desire of excelling in whatever he undertook, and of rendering himself most useful in his profession, he proceeded to Europe for the purpose of improving his acquisitions in medicine, and of extending his researches in those branches of science which are most nearly connected with it, and in which he afterwards excelled.

In the spring of 1784, shortly after his departure for Europe, the trustees of the medical school of Philadelphia, as an evidence of his attainments in his professional studies, conferred upon him the degree of Bachelor of Medicine.

At the university of Edinburgh he was distinguished for the same assiduity, correct moral deportment, and retiring modest demeanour, that characterised him in every period of his life, and which, young gentlemen, permit me to add, you will ever find to be the sure and never failing passports to distinction and usefulness.

Such, too, was the impression made at that early period of his life, upon his friends in the university of Edinburgh, that his name was ever afterwards mentioned in terms of the warmest regard

and respect. The impression which was thus made upon my mind, by the affectionate language in which he was spoken of by the late celebrated divine, Dr. Erskine, the present eminent physician of that city, Dr. Charles Stuart, and by the elder Professor Duncan, in all of whose families he had been domesticated, can never be erased.

In 1786 he was graduated a doctor of medicine at the university of Edinburgh: upon that occasion he published and defended a Thesis, "*De Animo Demisso*," to which subject his attention was probably directed by the feelings that constantly found a residence in his own sensitive bosom.

In February, 1787, after an absence of nearly four years, Dr. Wistar returned to Philadelphia, instructed in every branch of medicine, and the physical sciences with which it is most intimately associated: he was accordingly prepared to fill any station, in which his services might be called for, either as a practitioner, or as a teacher of medicine.

The first testimony borne to his merits by his fellow citizens upon his return to his native country was, his appointment as a physician to the Philadelphia Dispensary, which had been established in the preceding year.

About that period, the medical school attached to the *University of Pennsylvania*, and an association denominated the *College of Philadelphia*, were rival institutions.

The physicians of that metropolis became early acquainted with the professional merit and erudition of their new associate; he was accordingly invited to the professorship of Chemistry and Physiology, in the "*College of Philadelphia.*" This station he accepted, and immediately entered upon the duties assigned him.

As a teacher, he at once evinced those great qualifications, by which he was afterwards distinguished. The same fluency of utterance, the unaffected ease and simplicity of manner, the perspicuity of expression, the animation and earnestness arising from the conviction of the truths he was delivering, as well as the desire of impressing them upon the minds of his pupils, and the readiness with which he summoned and applied the numerous

and varied resources of his mind, which many of you, now in my hearing, have had an opportunity of witnessing, Dr. Wistar displayed in a most remarkable manner, in the first lessons he delivered in the then college of Philadelphia.

Although his labours greatly contributed to the reputation of the school with which he was connected, as soon as a favourable moment for conciliation presented itself, with his characteristic amiable and benevolent temper, he evinced the most ardent desire to see the conflict terminated, and the two schools united. Let me add, that chiefly by his instrumentality and disinterested exertions, that very important object was accomplished.

Upon the consolidation of the two rival schools, Dr. Wistar was associated with the late celebrated Dr. William Shippen, as an adjunct professor of anatomy and surgery in the University of Pennsylvania.

I need not say how much his exertions, united with those of his colleagues, have contributed to elevate that medical school to its present high distinction.

The benefits derived from the labours of Doctor Wistar are too well known and appreciated to require notice on this occasion. His transcendant merits as a teacher have left an impression upon those who have had the pleasure of hearing his lectures, that can never be forgotten. Such were his fascinating powers of description, that even upon those subjects that are usually considered as an uninviting part of a course of anatomical lectures, the attention of his hearers was ever awakened, and unremitting; even in the demonstration of a *muscle* or a *bone*, his views were those of the philosopher as well as of the anatomist.

But the university of Pennsylvania was not the only scene of his usefulness. Shortly after his return to his native city, he became extensively engaged in the practice of physic and surgery. In the latter branch he was initiated under the immediate friendship and patronage of the late Dr. John Jones, then the most distinguished surgeon of the city of Philadelphia, as he had been of the American army during the revolutionary war.

Dr. Jones, knowing the modest merit of young Wistar; know-

ing too that he had been well instructed in the principles of surgery, as well as the other branches of medicine, took an early opportunity of introducing him to the citizens of Philadelphia as an operating surgeon.

Dr. Jones having occasion to perform an important operation, invited Dr. Wistar to accompany him; when the patient was prepared, Dr. Jones, addressing Dr. Wistar, as having better sight than himself, at the same time presenting him his knife, requested it as a favour that he would perform the operation. Dr. Wistar immediately complied, and such was the skill and success with which it was performed, that it at once introduced him to the confidence of his fellow citizens. The delicate manner in which this unexpected compliment was paid to the talents of Dr. Wistar, was not lost upon his feeling and grateful heart; he ever after acknowledged the patronage of his benefactor by every act of kindness in his power, and by the unceasing expressions of filial affection.

Dr. Wistar was also very early elected one of the surgeons of the Pennsylvania hospital, where he enjoyed the opportunity of illustrating, at the bed side, the principles of practice which he taught from the desk of the university: and permit me here to remark, that his views were not confined to the mechanical or operative part of his profession; but, following the example of a Kirkland, a Pott, a Cruikshank, a Hunter, and an Abernethy, his survey of the disease ever embraced a regard for those *general principles*, upon which alone that art can be successfully practised.

Dr. Wistar was too much engaged in the practical duties of his profession, to enjoy leisure sufficient for extensive literary undertakings. The writings, however, which he has left, are of a nature and character which cause us to regret they are not more numerous. During the prevalence of the yellow fever in Philadelphia, in 1793, and in subsequent years, he was an active partaker in the scenes of calamity that desolated that city; and in the Transactions of the College of Physicians of Philadelphia, you will find several interesting notices by him, on the peculiar character of that fatal epidemic. The *System of Anatomy*, which he originally designed and published as a text-book for his class, is familiarly

known to you all. In every page of that work, whether we view him as an anatomist, or as the enlightened and profound physiologist, the author shows how competent he was to the important office he assumed. He also enriched the Transactions of the American Philosophical Society with several interesting memoirs, and in the volume of this learned association now in the press, and about to appear, he has drawn up with great fidelity, a circumstantial account of the life and labours of his late colleague, Dr. William Shippen.

As a literary character, few men held a more elevated rank, in the estimation of all to whom he was known, than Dr. Wistar. Beside those branches of science more immediately connected with the medical profession, as far as his duties as a practitioner permitted, he cultivated, with great industry and success, almost every department of literature. His house was the weekly resort of the literati of the city of Philadelphia; and at his hospitable board the learned stranger from every part of the world, of every tongue and nation, received a cordial welcome. His urbanity, his pleasing and instructive conversation, his peculiar talent in discerning and displaying the characteristic merits or acquirements of those with whom he conversed, will be remembered with pleasure by all who have ever enjoyed his society and conversation.

In 1815 he was elected an honorary member of the Literary and Philosophical Society of New-York; and, as an evidence of the high estimation in which he was held, both for his learning and his private worth, I may add, that when the presidency of the American Philosophical Society for Promoting Useful Knowledge, was vacated in 1816, Dr. Wistar, was elected to fill that honourable station: honourable, having been previously occupied only by his illustrious predecessors, a Franklin, a Rittenhouse, and a Jefferson.

An Account of a Sudden Death, which became the subject of Forensic Enquiry. By Joseph Klapp, M. D.—one of the Physicians of the Philadelphia Alms-house.

Towards evening, on the sixth of August, 1817, I received a message requiring an immediate attendance to Mr. William Hoffner, residing in the Neck; the summons was obeyed with all convenient despatch; and on my arrival the patient was found to labour under the following symptoms: He was insensible, the eyes fixed, with somewhat dilated pupils, incapable of any kind of utterance, the breathing constantly oppressed, and occasionally interrupted, the pulse was more frequent than natural, though soft; and his forehead was occupied by a contusion, which had produced a degree of swelling sufficient to close the eyes. The left side of the forehead, and the left eyelid, were most affected. From further examination it was found, that there was an additional bruise of the size of the palm of the hand, seated in about the middle of the left side; this was of a dark colour; and it was also remarked, that in other parts of the body two or three more slight bruises, or scratches existed.

During the forenoon of the seventh, I visited him a second time, when he still remained speechless, also insensible, and incapable of the slightest voluntary motion. In regard to some other particulars, however, his case had undergone some alteration since the time of my first seeing him; the skin, for instance, was warmer; the pulse had acquired some tension and fulness. The breathing was still oppressed, and had become a little stertorous. When the insensible state of the patient was mentioned, I should have intimated, that though such was actually his condition as regards the common objects of sense, yet two or three times in the course of examination it was remarked, that some evidence of remaining sensibility was indicated, when I pressed pretty hard with my fingers on the contusion of the forehead; but, in every other respect, repeated endeavours, such as calling his name aloud, sitting him up in bed, shaking him, &c. &c., were incapable of rousing his

attention in the slightest degree. During the remainder of the day, and through the evening, he continued to be afflicted generally in the way I have described; but towards the latter part of the night the breathing became more difficult, and at two o'clock in the morning of the 8th he expired.

Treatment.

Having been assured by those whom I found at my first visit, surrounding the bed of the patient, that at the time of the combat which had given rise to the contusions described, he (the patient) was also in a state of intoxication, it may naturally be supposed that it was difficult, if not impossible, for me to determine how much of his disease was produced by *the one*, and how much was attributable *to the other* cause. I was, at the time, not ignorant that this difficult and obscure diagnosis, involved a question not only of present medical, but would become of legal consequence. Stupor, and insensibility, it is well known, are too often exhibited as the effects of inebriety, as well as the consequences of contusions on the head, or fractures of the skull. Besides, the examination which I had made of the swelling on the forehead, had led me to believe that the bone beneath had not been injured; and I also thought myself warrantable in concluding, that a blow, simply from the fist, on that firm and thick part of the cranium, was an insufficient cause to account for the symptoms related. Accordingly, when interrogated by the family in relation to my expectations in the case, I replied, that though it was sufficiently manifest that the patient was in a condition both critical and dangerous, yet if we were justifiable in imputing his disease in part to liquor, I should trust there still remained some slight grounds for hope. Instances are not rare, where a high grade of stupor, with fixed eyes, and even dilated pupils, from deep and too frequent potations of ardent liquors, have been known to entirely disappear after the patient had been left to himself to enjoy some hours of sound repose.

It must not be omitted to mention, that the above reflections were led to by the kind of information I was able to collect at the

time from the relations of my patient; the two stated causes of his disease being the only ones known or alleged by them. Of this circumstance I have made a note, on two accounts: in the first place, because it will explain why, after a more perfect and a more minute prosecution of the subject, afforded by the opening of the body after death, as well as aided by the counsel of a medical friend presently to be mentioned, I was induced to attach far less weight and consequence to the contusions as a cause of the disease in question; and secondly, it will serve as the best apology I can offer for the slight encouragement of recovery which had been given.

Previous to my getting to the patient, I was told he had been bled from the arm to the extent of sixteen ounces; finding that the pulse had become soft and frequent, and moreover on account of the habits of the patient, I conceived it requisite to order some weak toddy to be administered every now and then, during the night. In regard to the bruises exhibited on different parts of his person, I only judged it necessary to direct them to be covered with pieces of linen, to be frequently steeped in lead water.

On the 7th, as before mentioned, I made my second visit, when the pulse had risen considerably, and fourteen ounces of blood more were taken, and the stimulating drink was discontinued. Leeches were prescribed to be applied to the swelling on the forehead, the saturnine applications to be continued, and the bowels being constipated, a purge of rhubarb and calomel was directed.

Before an opportunity was afforded to make use of the prescriptions of this day, an unfavourable change occurred in the case, of which I was apprised in the afternoon by a messenger; and, as has been already stated, the patient died at two o'clock the next morning.

Dissection.

This was performed by Dr. Joseph Hartshorn, in the presence of the coroner and his jury, and the following is a minute, taken at the time, of what was observed in the course of the examination.

It was conceived unnecessary to extend the dissection much beyond those parts which lay contiguous, or beneath the different contusions above described. Therefore, in order that the process should be conducted with the utmost fairness and accuracy, before any incision was made, the external surface of the body was first exposed to the view, and the different bruises carefully inspected. This being done, Dr. Hartshorn, in the next place, proceeded to trace, with the scalpel, the internal consequences which had, probably, resulted from the outward marks of violence. The sternum being removed in the usual manner, the contents of the thorax were first cursorily examined. In this cavity, nothing worthy of particular remark was discovered. The heart was in a natural state. Some slight adhesions were found to exist between the left lung and the pleura. The cavity of the abdomen having been exposed, it was observed, that the substance of the liver was of a harder consistence than was usual. The stomach was perceived to be somewhat distended with air, but showed on its external surface no marks of violence or disease. When opened it was found to contain about half a pint of a yellowish liquid. *The mucous membrane of the cardia and of the upper part of the stomach, was very much inflamed.* In every other respect the stomach appeared to be in a natural condition. The kidneys and intestines presented nothing remarkable in their appearance. The contusion on the left side, which has been described as being about the size of the palm of a man's hand, proved to be merely skin deep; the muscles, and ribs underneath, being in a sound state. On cutting down into the swelling on the left side of the forehead, considerable extravasation of dark coloured blood was discovered under the skin and between the muscles, but the bone immediately below was uninjured. A portion of the bone at this place was next taken out with a trephine, which proved that the skull was not only unhurt, but stronger and thicker than common. The brain below was in every respect quite natural.

The entire examination of the body of the deceased, both external and internal, at least so far as appeared to relate to the very

important question under enquiry, having now been performed, the customary oath and affirmation was adminstered to Dr. Hartshorn and myself, enjoining upon us to give evidence of the cause of death, so far as the knowledge we had acquired on the subject would admit. In a short time, after retiring for deliberation, we came to the conclusion, that the bruises exhibited on the surface of the body could not have been, in our judgment, the cause which had occasioned death. They appeared too trivial and limited in their effects, and were seated in parts altogether too unimportant to affect, or to bring into danger, the life of any person. In the second place, we concurred in opinion, that the inflammation which, in the course of the dissection, had been discovered on the internal surface of the stomach, and particularly about its upper orifice, was a sufficient cause to account for death. Thus it became not only an important, but a very nice question for us to elucidate, whether this inflammation had been occasioned by the combat which the deceased had been engaged in, about thirty-eight hours previous to his demise? For the following reasons we agreed it had not: viz.

1. On carefully questioning several persons under oath, who were eye witnesses to the fight, it could not be ascertained that the deceased had received any blows from his antagonist on the region of the stomach. These evidences, questioned by Dr. Hartshorn and myself in the presence of the jury of inquest, could testify to the infliction of blows upon other parts of the body, but saw none given in the direction of the stomach.

2. After a minute inspection of the integuments laying over the stomach, we could not find the slightest trace of any violence having been received upon this part.

3. The external surface, and the exterior coats of the stomach, were all in a sound state, exhibiting no inflammation or discoloration whatever; a condition the very reverse from what we would have expected to find, had any such violence been done to this organ.

4. Had this inflammation been produced by a stroke received on the region of the stomach, it is most likely the disease would

not have been found seated so high up as about the cardia, but on its greater curvature, or on such other parts of the organ, as, from their natural situation, would be made accessible to blows aimed at the epigastric region.

5. Had such knocks, or violence, been applied during the combat on the stomach, sufficient in number or force to kill, it appeared to us likely, that, from the well knowr sensibility of this vital organ, the deceased would have immediately, on being thus hurt, affirmed the fact.

For instance, it would have been natural to expect, from what has often been noticed to arise out of fatal blows which, under other circumstances, have been received on the stomach, that the deceased would have directly, on being thus hurt, been stunned, or while in anguish, he would have applied his hands to the part, or have expressed, in some way or other, either by words or actions, the mortal injury done him. Instead of this being the case, it appeared, from the statement of witnesses, that, shortly after the battle was ended, the deceased was able to walk about, was even jocular, dared his antagonist to renew the fight, and then sit down to share with a friend a half pint of spirits.

From the above data, and resolutions, we felt ourselves conscientiously prompted to return to the coroner, and the jury, the following opinion:—After the most mature deliberation, Drs. Hartshorn and Klapp are of the opinion, that the death of William Hoffner was not caused by external violence.

Our opinion having thus been declared, the jury of inquest, after the examination of other witnesses, proceeded themselves to discuss the question. Their decision was, that the deceased had died of inflammation in the stomach, occasioned by the beating he had received a short time previous. This verdict was of course immediately followed by a prosecution against the person who had been the antagonist of the deceased in the combat. In the month of January, 1818, the action was tried in the court of oyer and terminer, and general jail delivery for the city and county of Philadelphia, before William Tilghman, esq. chief justice, and Duncan, j.

Commonwealth v. Samuel Hergesheimer. } Indictment—Manslaughter in feloniously killing William Hoffner.

The court having examined a variety of witnesses in support of the prosecution, the medical testimony was next taken.

JOSEPH BARNES, esq. for the prisoner, opened.

He said, that the deceased came to his death by an inflammation in his stomach, occasioned by intoxication; and that the prisoner was justified by the circumstances which he stated at large.

The witnesses for the defendant were then called.

Dr. Joseph Hartshorn affirmed. On the 8th of August, last year, in conjunction with Dr. Klapp, I examined the body of the late William Hoffner. The naked body was laid on its back on a table, and every part thus exposed to view was carefully inspected. There was a very severe bruise on the left side of the forehead; there was a contusion on the left side of the trunk, near the lowest rib: several other marks of injury on the external surfaces of the body appeared, but they were, I think, too trivial to require description. The next step in the investigation was, to trace the effects of those bruises, by dissection. This I did in the presence of several of the jury of the inquest, and showed them the depth and whole extent of the bruises inflicted by the prisoner. An incision was made through the bruised part of the forehead to the scull, which rendered it evident that the soft parts only had been injured. There was a slight discoloration of the bone, which was laid bare by this incision, which was produced, I believe, by a diffusion of blood from the ruptured vessels. An incision was made on the opposite side of the head, which had not been wounded, and the part of the cranium thus laid bare was similar in appearance to the opposite bruised part, except that it was less coloured with blood. I then opened the cavity of the thorax and abdomen, and examined the viscera which they contained. The liver was of a much harder texture

than usual; the stomach was somewhat distended with air; its external surface showed no marks of violence or disease; but on opening the stomach we found strong marks of inflammation, of as high a degree as I have ever seen in any stomach. I have since had an opportunity of examining the stomach of a man destroyed by intemperance; his stomach was very much inflamed, but less so than that of the deceased. I feel perfectly satisfied that the inflammation in the stomach of the deceased was not produced by external violence, because it was in a part entirely out of the reach of any blow that could have been inflicted; and because the appearances were not such, as, in my opinion, would have been induced by a blow. The cause I believe was the intemperate use of ardent spirits. This opinion I adopted from the examination, as well as from the testimony of several witnesses given to the coroner.

[Here the court informed the Doctor that he must confine himself to the appearances, and his own observations.]

The Doctor proceeded—

It would be impossible for me, simply from what I saw, to decide upon the cause of this inflammation. The intemperate use of ardent spirits would have caused such an appearance. A circular piece of the cranium, immediately under the bruise, was removed; the careful examination of the brain induced me to believe that the brain had received no violence. There might have been a concussion of the brain, without my being able to perceive it; but this concussion would have required a greater force than an unarmed man could inflict. It might have occurred from the fall: it often happens from a fall. From a concussion of the brain, the patient is rendered unable to speak, and loses, in a great measure, the power of motion. It is impossible to discover this concussion, but by dissection of the brain, which was not done. The bruise in the side merely went through the skin. If he had died of a blow on the stomach, we would have been made entirely sensible of it, because that part, inside and out, would have shown the appearance. I saw no such mark over the stomach as has been spoken of. I

am disposed to believe the witness must have been mistaken, by not knowing the situation of the stomach: by such a blow the patient would instantly have been rendered insensible, or would have made his situation known to every one present. The distress would have been greater than could have been borne by any man, without making some peculiar complaint, which would have been noticed by every observer. I have observed a number of instances of sudden death in intemperate persons, a few hours after eating a hearty meal, and have often met with instances of death in intemperate persons who had very little previous complaint. In some, dissection has shown that the patient died of apoplexy; in other instances, no mark of disease is found excepting in the stomach. In Hoffner's case, had we examined the brain, we would not have been able to have told whether the extravasation was occasioned by concussion or inflammation: this was one of the reasons why we passed it by. Every part of the brain is liable to be injured by intemperance, and every part is liable to be injured by blows; and I know of no mode of distinguishing where the brain had been injured by both, or either, but by tracing the injury on the surface. We did this, and found no external injury. Strong motions of anger would have exasperated the disease, so would great bodily exertion. The symptoms would be various in different patients taking ardent spirits. A common symptom is delirium; in some cases it is stupor.

Being cross-examined, he said, I have forgotten the symptoms in Hoffner's case. The prisoner was the first man who told me the deceased was intemperate. Dr. Klapp then gave me the same information. I attended at the written request of Dr. Klapp, brought me by the prisoner. I heard an account of the case from the prisoner, previously to going to see the body. I know of no distinction in the appearance of the inflammation, by whatever it may be called. Sudden death is more common in intemperate, than in temperate men. I cannot tell how long the deceased may have lasted, from examining his body, had he received no beating. It is impossible to tell whether the death might not have been accelerated by the external cause. I did not probe the brain. I would consider the

danger of a man suffering under such an inflammation increased by a beating. I could not tell, in this instance, whether death was hastened by the beating inflicted on him while in the inflamed state or not.

The next testimony in order was my own, but as the information embraced by it has already been detailed in the history and investigation of the case, I do not think it necessary to transcribe it.

Several other witnesses followed, but their statements not tending to further elucidate the medical part of the inquiry, it would be useless to notice them in particular.*

The evidence having closed, the subject was finally discussed by eminent attorneys and the court.

C. J. Ingersoll, esq., who was employed by the heirs and relatives of the deceased, stated to the court and jury the points on which the prosecution rested.

The jury was then addressed by Joseph Barnes and Samson Levy, esqrs.; and the case was summed up on behalf of the commonwealth, by the prosecuting officer, Peter A. Brown, esq.

After which the court, through the chief justice, gave a learned and impartial charge to the jury.

The jury retired about one in the morning of the 16th of January, and about half past ten o'clock, returned with a verdict of—*Not Guilty.*

Philadelphia, March 4th, 1818.

* The trial may be found detailed in the American Centinel of about the middle of the last month.

A Case of Ulcerated Scirrhus of the Pylorus. By John Eberle, M. D. of Philadelphia.

J. DILLER, aged 55, of plethoric habit and robust constitution, had, in the fall of 1814, a carcinomatous tumour of the lip extirpated by Dr. Physick. For nearly a year after this operation he enjoyed a very good state of health. In July, 1815, he began to complain of a pain in the stomach, attended with symptoms of dyspepsia, such as borborygmi, fœtid eructations, vertigo, with alternating vomiting and purging. The matter voided by stool was of a chocolate colour; every thing he took into his stomach was thrown up, and always had this peculiar dark colour. All medicines which his attending physician, Dr. Luther of New Holland, Pennsylvania, could devise, invariably aggravated the gastric affections, and induced an intolerable burning sensation in the stomach. In the month of October, he complained of an unusual and painful distention of his stomach, with obstinate constipation of the bowels. About the middle of November, an irregular indurated tumour was felt in the left portion of the epigastrium; there was evident pulsation in this tumour. From this I supposed, that there was an abscess forming; and that, if in the stomach, adhesion had taken place with the contiguous parietes of the abdomen. This idea was, however, soon relinquished, on observing that the tumour changed its seat, with a change of position of the patient. A difficulty of deglutition was now experienced by the patient, and all the former symptoms returned with redoubled violence. At this stage of the complaint, I put him under a mild course of mercury, with such palliatives as were found most effectually to relieve the distressing symptoms attending the complaint. Epispastics were applied over the tumour; no aliment whatever was now retained by the stomach; the food and drink which he took in the morning, was invariably retained only until the following evening, when it was thrown up of a dark chocolate colour. He lingered on in this way, receiving daily, twice or thrice, some nutritive injections, until the middle of September, when he died, apparently in great agony.

Dissection.

On opening the abdomen, I found the omentum of its natural appearance. The intestines also evinced no morbid appearances. A tumour was, however, immediately visible in the upper part of the abdomen; which was found, on inspection, to consist of a scirrhus tumour of the pyloric extremity of the stomach: on raising it from its depressed position, a quantity of thin puss issued from it. Having removed the tumour, it was found to weigh one pound two ounces; the whole of the lower part of the stomach was scirrhus; the pylorous was nearly impervious. On a comparison of this tumour with the one which was removed from his lip, they were found to be similar in appearance and structure.

REMARK.

In page 230 of Prost's work, entitled, "*Medecine Eclairée par l'Observation et l'Ouverture des Corps*," a case is given in many respects similar to this one. Ferrier, in his Medical Essays, also mentions a case much like this one.

A Case of Dropsy, communicated by Dr. Culbertson, of Chambersburg, Pennsylvania, dated February 28, 1818.

Gentlemen,

In conformity with your request, I now send you the subjoined communication on the subject of general Young's case of Dropsy. In a practical point of view I think this case must be considered an important one; and if such it should be deemed by you, and you should consider it as calculated to promote the advancement of the healing art, or in any way to subserve the cause of medical science, you are at perfect liberty to communicate it to the medical public, through the medium of the Medical Recorder.

Case.

On the 13th of July, 1817, I was first requested to wait on general Robert Young of Alexandria, aged about forty-eight years, then on a visit at his brother's in this neighbourhood. I found him labouring under a most oppressive dropsical complaint, of the combined forms of ascites and anasarca. I was then informed by him briefly, that he had been affected with this disease for nine months or more; that he had undergone a long course of medical treatment for it without avail, under the direction of the most respectable medical gentlemen; and that, finally, his case had been abandoned by his physicians, and considered as hopeless and incurable.

General Young had left his house in June, with the view of visiting the Bedford springs, at which time he was so excessively weak and debilitated as to be unable to walk across his room without assistance. He had now just returned from the springs, and though he was not reduced in size, yet had gained considerably in strength. He was now able to take moderate exercise on horseback; his appetite tolerable, and thirst moderate; but his complexion was sallow and bad, and his whole countenance of a bloated appearance. His pulse was most remarkable for its irregularity: it was very frequent, though irregularly so; and very small, yet occasionally discovering a full, strong, and tense beat. The urinary secretion was in small quantities—not perhaps exceeding a half pint in 24 hours; was of a whitish turbid appearance; and, on being permitted to stand, deposited a firm mucous kind of substance. And what rendered his case still more complex and unpromising in its issue was, its being complicated with a partial paralysis of one side—the arm, in particular, of this side, being entirely powerless and useless, and the muscles fast wasting away. This affection was secondary, and, no doubt, resulted from the circle of circulation being more limited in consequence of pressure on the abdominal arteries, thereby throwing a preternatural quantity of blood to the head. The carotive artery of the paralytic side was affected with the most extraordinary, violent,

and irregularly agitated action; and the head was subject to a distressing course of tightness, and occasionally severe pain.

The general informed me that, on his way from Bedford, he had accidentally met with a Dr. Newman, of Old Town, Maryland, and who, under the circumstances just now stated, very properly and correctly advised the loss of blood. With this view, I was now consulted. I soon found, however, that my patient was strongly prepossessed in favour of bleeding, as he was determinedly opposed to the use of almost every other remedy. I endeavoured to impress on his mind the importance, and even the necessity of the co-operation of digitalis, and mercury particularly, in aid of the lancet; but in vain—he, unfortunately, having the most fixed and inveterate prejudices against those medicines. It will, therefore, readily be seen, that I had little latitude allowed me in my prescription; and accordingly, being almost exclusively confined to the lancet, I was determined to use it freely and liberally, in order to ascertain really what effects would result from its use alone, in so formidable a form of disease as the one under which my patient laboured. I therefore immediately drew from his arm thirty ounces of blood. It was somewhat sizy; it coagulated speedily and firmly, and its component parts were in due and natural proportion.

July 14. He expressed great relief from the bleeding of yesterday. Can walk, and exercise on horseback, with more freedom and ease than before. Repeated blood-letting sixteen ounces. Take sal. nit. and keep up a constant action on his bowels by means of the following pills, which were prescribed for him by his attending physician previous to his leaving home.

℞ Aloe. socot. ʒss
G. gombog. } an ℈ij
G. scammon. }
Pulv. rad. scillæ ʒss
Ol. junip. gt. 30
Sapo. castil. q. s.—M. ft. pil. No. 40.

July 16. Continues much the same as on the 14th. Blooded him to day twenty-four ounces. Appearances of the blood the same as before. He is freely purged.

July 19. Expresses himself as greatly relieved. Says that the stiffness of his knees and legs, of which he complained much, is entirely gone. He takes exercise freely on horseback, and is gaining his strength fast. He is also rapidly recovering the use of his paralytic arm. The urine, however, still continues in small quantities; and, on the whole, he rather appears to be increasing in his size. Is still confident that bleeding will cure him. Took from him twenty-four ounces of blood.

July 25. Continues as on the 19th. Blooded him to-day thirty-two ounces.

July 27. Blooded him thirty-six ounces. The pulse does not appear to be affected in any way by the loss of blood. He still expresses great relief from the bleedings.

July 29. Blooded him thirty-six ounces. Take crem. tart.

August 1. Is not so well to-day. Complains that the last bleeding, for the first time, produced giddiness of the head, and weakened him considerably. He is very much disheartened, and is loosing his confidence in the lancet. Is increasing rapidly in his size; though he ascribes it to the use of the crem. tart. which had been prescribed for him on the 29th. I now think it prudent, for the present, to advise a discontinuance of the bleedings.

August 4—7—10. Has been using what he calls a "diet drink;" which, on account of its being nauseous and very unpleasant to take, has been held in reserve as the dernier resort, in case other means failed.

It appears that considerable, though temporary advantages, had resulted from the use of this compound, previous to his leaving home; and he is now determined to give it a fair trial. His debility is increasing, and his disorder is gradually growing worse.

August 13. He is now almost altogether confined to his bed; and notwithstanding the use of his favourite nostrum, is reduced to the necessity, to obtain present relief, of submitting to the operation of paracentesis abdominis. On this occasion, Dr. Dean, a medical gentleman of this place, was requested in attendance with me; and accordingly this day we drew from his abdomen five gallons of water.

We now embraced the opportunity of representing to general Young the importance of *system* in his treatment; and at the same time held out sanguine hopes of success in his case, provided he would lay aside all nostrums, and place himself under our exclusive direction. This, after great doubting and hesitation, he agreed to.

August 14. Dr. Dean and myself again attended to-day, and found our patient greatly relieved by the operation. He made considerable more urine last night than he had been in the habit of doing. His pulse, however, still continued as irregular as before the operation.

After a careful investigation of the case, we concurred in the propriety of again commencing the treatment of it by bleeding; and following it up with the digitalis and mercury. Accordingly we immediately drew from his arm thirty-two ounces of blood; used frictions over his abdomen with strongly camphorated mercurial ointment, and secured on it, in addition, a flannel compress, saturated with the same ointment, with a roller firmly and tightly applied. No preparation of mercury whatever was given internally. After to-day we were deprived of the assistance of Dr. Dean's advice, in consequence of his indisposition.

August 15. Urine is again diminished in quantity. Repeated the blood-letting thirty-two ounces; and continued the mercurial frictions. Take infus. digital. with sal. nit. dissolved in it—one table-spoonful morning and evening.

August 16. Complains much of being weak. Gums are considerably affected with the mercury. The abdomen appears to be again filling with water. I now feel myself compelled, though I confess with great reluctance, to discontinue the bleedings. Continue the mercurial frictions and the digitalis; increasing the latter to three table-spoonfuls a-day.

August 17—18—19. The mercurial agitation is greatly increasing—the mouth very sore. Water is re-accumulating in the abdomen rapidly. He is in almost a constant state of perspiration, and has been usually in this state. The digitalis nauseates the stomach a little, though nothing like vomiting. It does not

appear to affect the head; though it appears to occasion some indistinctness of vision. The bowels are in a regular way. Continue medicines as before.

August 20. Is rapidly growing worse. Complains of great debility. The accumulation of water in the abdomen nearly as great as before the operation. My anxiety for the result is now excessive: indeed I altogether despair of success; and the last lingering hope of my unhappy patient is almost in a state of exhaustion; and his despondence is the more increased, inasmuch as he has not only no faith, but, on the contrary, the most inveterate prejudices against the remedies employed for his relief.

Now, however, appeared to be the critical period; and the result affords as proud a triumph to the science of medicine, as it amply rewards him for his perseverance and all his sufferings. On enquiry to-day, general Young informed me, that he had always observed, that in proportion to the water drank, was the quantity of urine made. I was struck with the importance of the fact; at least I viewed it so in his case; and immediately determined to take advantage of it. I therefore desired him to drink freely of cold water; which he did, though without feeling any great desire for it; and the effect exceeded the most sanguine expectations that I possibly could have entertained. In a short time after drinking the water, a determination to the kidneys took place, succeeded by the most copious urinary discharges; at least two gallons in the first twenty-four hours; and this effect continued until the whole water was completely evacuated from the system. In giving the details of a case, it is of all importance that every important circumstance in any way connected with it, should be accurately and correctly stated: it is for this reason, therefore, that I state the above fact. *What agency had the cold water, or had it any, in producing the effect which I have attributed to it?*

On the 23d the salivation ran very high—the mercurial frictions were therefore discontinued. The infusion of digitalis was continued a few days longer, when it was also left off.

By the 31st, the system was completely relieved of all its serous

collections; at which time, and not before, the pulse regained its healthy regularity of action.

The mercurial action continued very high until the 10th of September. The gums and cheeks being excessively sore and deeply ulcerated. From this time the salivation gradually subsided; his appetite returned; he was able to take moderate exercise on horseback; and, in short, regained his strength so fast, that by the 20th of the month, he was able to return to his home by the common mail stage And I am happy to add, that, by a letter received from general Young, as late as the 3d instant, he still continues well, and there is no appearance of any return of his former complaint.

In conclusion, I may be permitted further to add, and no doubt it will be considered surprising, that general Young, on weighing himself after being relieved of his disease, discovered that he was reduced one hundred pounds below his usual healthy standard.

REMARKS.

The case just now recited is still imperfect. A communication from the repectable medical gentleman who attended the subject of it in its early stage, is yet wanting to make it complete. We could then with more certainty appreciate the importance of the means used, which happily eventuated in success, by contrasting them with those that had been, though unsuccessively used. It happens however, generally, that the purging plan had been principally depended on, and very perseveringly urged, as the general informed me that he had been purged every day, without intermission, for two months; yet it would seem without any good effect resulting from it; indeed, on the contrary, his disease still continued gradually to gain ground.

This case, no doubt, will generally be considered, and deservedly so too, as principally important from the circumstance of the extent to which blood-letting was carried—and particularly when this is taken in connection with the successful issue of it. By many, however, the effects of blood-letting on this occasion will be considered as questionable, inasmuch as no apparent permanent

good appeared immediately to result from it; and by others, its propriety at all will not only be disputed; but, without doubt, it will at once be condemned as a rash and dangerous practice.

Without pretending, or even expecting to reconcile every difference of opinion that may be entertained in relation to the treatment of this case, I must beg leave, though briefly and without comment, to state, that my opinion is, from the most attentive observation on all the important attending circumstances, that blood-letting was absolutely indispensable to a successful result; and that a cure could not have been effected without it. On the other hand, however, it will as readily be admitted, and little reflection from a review of the case, will be sufficient to convince us, that the result could not, with even a shadow of propriety, be attributed to blood-letting alone. This, indeed, would be looking for more than reasonably could be expected from any single remedy. In short, I believe, that the combined co-operation of the lancet, aided by the digitalis, and both backed and confined in their operation by mercury, were all necessary to produce the successful result in this case. It may, however, be admitted, and without any detraction from the character of the lancet, that it was carried to a greater extent on this occasion than perhaps would have been necessary, provided the other co-operating means had been earlier employed in aid of it.

This case, I think, at least must tend to produce the all-important practical effect, of doing away all shyness and timidity on the part of the practitioner in the use of the lancet on similar occasions. It will also serve to show the extent to which blood-letting may be carried, when considered necessary, not only without injury, but with the happiest effects.

In short, I do most sincerely and cordially add my most unequivocal testimony to that of Dr. Newman, in favour of the importance of the most extensive practice of blood-letting in dropsy. And, further, I do most honestly believe, with Dr. Newman, that the "right use of the lancet" in this formidable form of disease is not generally, or well understood. When Dr. Newman declared this opinion in his newspaper publication of the preceding case, I considered him presumptuous; and whatever little vanity I still may

consider as connected with the hasty and imperfect character of that publication, yet it ought not, and will not prevent, on my part, the fullest acknowledgment of my most honest conviction of the correctness of the Dr's. opinion in its fullest extent, relative to the use of the lancet in the disease above alluded to. Is it believed that blood-letting is of all-importance in the most inflammatory cases of pluerisy? I believe it to be equally necessary in dropsy. I believe it may, and frequently must be carried to a much greater extent in the latter disease, and with less risk of unduly debilitating, or doing injury to the system. In fact, I believe there is scarcely any form of dropsy in which the lancet may not be used to a greater or less extent; but in some cases certainly to a much greater extent than in others. I now have a dropsical patient under my care, from whom I have in six days taken, at four bleedings, one hundred and twelve ounces of blood with the best effect; and he is now stronger and more able to exercise than when I first saw him. When I urge, however, the use of the lancet in dropsy, I must not be understood as using it to the exclusion of other remedies—far from it: I believe the lancet, digitalis and mercury particularly, as the happiest combination of means that can be advised for the treatment of this formidable disease. Blood-letting, however, must not be practised as is generally done, by merely practising one or two small bleedings, to prepare the way for the use of other medicines; but it must be used profusely and repeatedly. Its use, in short, not to be governed by the quantity taken, but the effect produced, and the necessity that may still exist for its further continuance.

But I have done—it not being my intention, on this occasion, to pursue this subject further. My remarks have been almost exclusively confined to blood-letting, conceived as an important remedy; indeed, I may say an indispensable one, in the treatment of dropsy; and if what I have said should have the effect of engaging and fixing the attention of physicians to this important point in their treatment of this disease, I shall have attained fully my object.

I am, gentlemen, yours very respectfully,

S. D. CULBERTSON.

To the Editors of the Medical Recorder.

FOR THE MEDICAL RECORDER.

An Abstract Account of the Diseases which prevailed among the Soldiers, received into the General Hospital, at Burlington, Vermont, during the Summer and Autumn of 1814. By Henry Huntt, Hospital Surgeon.

Washington.

During the months of May, June, and July, the northern army, stationed at Plattsburg, consisting of the brigades of Macomb, Smith, and Bissell, under the command of Major General Izard, enjoyed great share of health. The diseases were generally mild intermittents. In August, the troops were encamped on the low grounds north of Plattsburg. About the middle of this month diarrhœa and dysentery began to affect the soldiers. The cases rapidly increased in number; many of them were sent to the General Hospital at Burlington, Vermont. These cases were strongly marked with an inflammatory diathesis, and required frequent bleeding and purging to subdue the disease. The purges were generally composed of calom. and ipecac. In all cases, blisters were applied with success after the subduction of arterial action. Anodynes were always injurious, if administered the first three or four days of the disease; and in several instances the symptoms were so much aggravated by them, that we were obliged to resort to the lancet for relief. This mode of treatment was peculiarly successful, and not a single patient died in the General Hospital during this month.

About the last of August General Izard received orders from the War Department, to march with his main army to the support of Major General Brown, on the Niagara frontier. He marched from Plattsburg on the 28th with Smith's and Bissell's brigades, and left all his sick, amounting to more than six hundred, to fill Macomb's brigade. The enemy, a few days afterwards, threatened an attack on Plattsburg, and all the sick were sent to Crab-Island, (situated in Lake-Champlain, a few miles from Plattsburg;) here they were ordered to remain, (during a rainy season, and almost without accommodation) until transportation could be furnished to send them to the General Hospital at Burlington. They did remain on this island until the 6th and 7th of

September, crowded in tents, and lodged on the wet ground, for several days before straw could be obtained for them. In making this statement, it is not my intention to throw any censure on the commanding officer, or any other person concerned; I appreciate too highly the zeal and enterprize which pervaded every grade of the army at that critical time. Imperious circumstances rendered it necessary to send all the sick from Plattsburg; an attack was hourly expected by land and water, and transportation could not be sooner afforded.

From the 6th to the 10th of September the sick continued to arrive at Burlington in *open boats*, and during that time we received more than six hundred and fifty into the General Hospital; a great number of them were unable to walk; and some were so reduced by disease, as to be unable to tell their names. Almost every man was affected with diarrhœa, or dysentery, and many protracted cases had run into a state of typhus fever. The General Hospital was only calculated to accommodate three hundred patients; however, by placing the others in barracks, we were enabled to give them all comfortable quarters; and the greatest exertions were made by myself, and mates, to afford them all the aid in our power. The sick men were cleansed, and put into clean beds: those who were much emaciated and worn down by disease, were supplied with cordial and nourishing diet; others with medicines. Two-thirds of them were so enfeebled and emaciated, by exposure, want of proper diet, and a long continuance of disease, that none but cordial and astringent medicines could be used. In those cases of dysentery, where the strength of the patients would bear evacuations, we generally administered small doses of calom. and ipecac.; this purge was preferred because the liver in most cases participated in the disease; after the operation an anodyne was always given with advantage. The southern soldiers were the greatest sufferers among our sick, and particularly those of the 10th regiment from North Carolina, who had lately arrived on the frontier.

After the battle of Plattsburg (which was the 11th of September) we received seventy-nine men more, fifty-five of whom were badly wounded. Our labour now became incessant. Every

attention was paid to cleanliness and ventilation, as well as to their diseases. We could scarcely ever enter a ward without seeing half a dozen on the close-stool. To obviate the bad effects of these frequent evacuations, the walls and floors of the hospital were often washed with lime and water, and the latter covered with moist sand: lime and cold water were always kept in the pots, to correct the offensive smell of the fæces. The pots immediately after being used were emptied into a large tub, near the hospital, containing also lime and cold water. This *tub* was protected from the rays of the sun, and its contents were buried every evening. In addition to these precautions, a number of men were detailed every morning, to collect all kinds of filth, convey it into the field, and bury it. Several barbers were constantly employed in going through the hospital, and shaving all men who required it; and the nurses were strictly enjoined to change frequently the linen and bedding of the sick, likewise the straw in the mattresses.

Many of the patients, who had been long sick, were greatly distressed with nausea and puking, likewise with frequent thin, and copious alvine discharges: (in many cases involuntary). These cases were attended with a cold skin, and feeble pulse. In all such cases we directed flannel shirts and *worsted* stockings to be immediately put on our patients; and gave them chalk julep, with tinctr. of kino. and laud., the infusion of galls, brandy toddy, milk punch, injections of the sulphat of zinc, mucilage, and laudanum—applied blisters freely, and at night an anodyne. In some cases, when the above remedies failed, the lime water and new milk had a happy effect in relieving the nausea and puking: in other instances, a solution of carbonate of ammonia with laudanum, was more successful; but in many cases, all our efforts failed, and the disease could not be checked in the smallest degree. Nature appeared exhausted—a hickup supervened, attended by cold extremities and involuntary stools, which generally closed the scene.

Aphthæ, and *Ophthalmia* were very distressing to many of our patients, and several of them lost an eye. *Erysipelas of the face* affected others: in several instances, gangrene, extensive

ulceration, and death, quickly followed this affection. Some protracted cases terminated in pulmonary consumption.

In closing this account, it gives me much pleasure to state, that the great attention which was paid to cleanliness and ventilation, completely succeeded in preventing infection. The wounds generally wore the most favourable aspect, and convalescence was unusually rapid; although the wounded were placed in wards contiguous to the worst cases of disease.

A Consolidated Monthly Report of the General Hospital at Burlington, Vermont, under the direction of Henry Huntt, Hospital Surgeon, from the first of May, 1814, to the last of April, 1815.

1814	Remaining last month.	Admitted this month.	Discharged.	Died.	Remaining.
May,	161	151	119	17	176
June,	176	59	105	6	124
July,	124	30	63	1	90
August,	90	33	41		82
Sept.	82	729	404	31	376
October,	376	105	216	25	240
Nov.	240	52	84	11	197
Dec.	197	13	35	5	170
1815 January,	170	35	36	6	163
Feb.	163	56	57	3	159
March,	159	20	60	2	117
April,	197	12	54	2	73
Total,	161	1295	1274	109	73

A Case of Mania à Potu. By John Eberle, M. D. of Philadelphia.

In the month of January last, I was requested to visit Mr. J. Huber of Lancaster, aged about 29 years, who had been labouring under mental derangement for two or three days previous to my seeing him. As I was acquainted with his habits of life, which were extremely intemperate, I of course found no difficulty in ascribing his mental disease to its proper cause—the intemperate use of ardent spirits. As I had seen Dr. Klapp's statement of the usefulness of emetics in the cure of this species of mania; and knowing the respectability of the source from which it came, I determined to give this mode of cure a trial in the case before me. I accordingly prepared an emetic for my patient, which I administered, and remained with him until it had commenced operating. He had four or five copious discharges from the stomach, which appeared to consist almost wholly of a viscid mucous. When I saw my patient again, on the succeeding day, I was informed, that he had rested tranquilly during the preceding night, and I found him in every respect much relieved. Encouraged by this effect of the vomit, I gave him a second one, which also operated well, bringing up, as in the first instance, a large quantity of a slimy fluid. On the evening of this day he became quite rational; the erroneous perceptions had vanished from his mind. Next morning I saw him again, and declared him free of his disease.

FOR THE MEDICAL RECORDER.

Holcus Bicolor as a substitute for Chocolate.

Dr. W. P. C. Barton read to the Philadelphia Linnean Society, October 17th, 1816, some account concerning the use of the Holcus Bicolor as a substitute for chocolate. Since that paper was read, this plant has received much attention, both in our own country and abroad. As this species of holcus thrives perfectly well in our climates, and as it promises to become a very useful article, we will give a short account of it, extracted from the paper read by Dr. Barton, and afterwards make a few extracts from two letters, the one by the honourable Mr. Hale, dated Washington, January 17th, 1818, addressed to Dr. Barton; and the other from James Graberg of Hemio, Tangier, November 10th, 1817, addressed to Dr. James, corresponding secretary to the American Philosophical Society.

Holcus. L.

Hermaph. Cal. gluma 1. s. 2 flora. cor. gluma, sub apice aristata. stam. 3. styli 2. sem. 1.

Masculi. Cal. gluma 2 valvis. cor. 0. s. 2. valvis. Stam. 13.

Holcus bicolor. Glumis glabris nigris, seminibus globosis albis aristatis: man. 301.

H. glummis glabris. Hort. Cliffort. 468

H. (*Sorghium.*) panicula coarctata, ovali erecta, locustis hermaphoroditis obovatis pene glabris, subaristatis. meig. act. helv: tom: 8. p. 129. s. 4. f. 4.

Habitat in Persia D. Lerche O. H. V.

This plant resembles common *broom* corn very much. It is eight or ten feet high; is an annual growth, and requires no particular care or cultivation; the leaves are long and channelled; nerved, and sheathing the stem; the fruit, and of course the inflorescence, is borne in a terminal close, and compact panicle of an oblong ovate shape, differing in this respect from the *sorghum* sac-

eharatum, or common broom, the panicle of which is diffuse and spreading. It is a native of Persia.

The method recommended by Dr. Barton of making the beverage from this plant, which has a resemblance to chocolate, is this: The seeds, which are farinaceous, together with the glumes, are to be ground in grains, somewhat smaller than ground coffee. This is then boiled slowly, with the addition of a sufficient quantity of milk, and a small piece of butter, until the beverage assumes a chocolate colour; the liquor is then to be strained through gauze, and sweetened till palatable. This forms a very delightful and wholesome drink, and cannot be easily distinguished from chocolate.

Extract of a Letter from James Graberg, esq. Tangier, November 10th, 1817, addressed to Dr. James, corresponding secretary to the Philosophical Society.

"I submit to you the result of an experiment, made here by my dear and respectable friend Mr. James Simpson, consul general of the United States, and myself, in consequence of an article inserted in the Connecticut Mirror, No. 383, and read on the 17th of October, 1816, to the Philadelphia Linnean Society, by the president, Dr. Barton, relating to a plant used in Lancaster county as a substitute for chocolate, and which he describes as the holcus bicolor of Willdenow's species plantarum.

"This country produces two varieties of broom corn (Holcus Sorghum, Lin. syst. reg. 759), the one *sorghum vulgare*, has white seeds, with a black umbilical spot, enclosed in yellow husks or glumes, while the other *sorghum rubens*, the common mille of Cafferia, has bright yellow seeds, with persistent and glabrous husks of a dark chesnut brown colour. Willdenow's holcus bicolor, or Persoon's sorghum bicolor, (Trian. Diggn.) a native of Persia, which is another variety of the same species, was never met with in this part of Africa.

"The seeds of the sorghum vulgare furnish the Moors of this country with one of the principal articles of food, not only for themselves but even for their cattle, poultry, &c. Those of the

sorghum rubens hold by much a higher rank in esteem, and bear a proportional higher price than the former.

"It is with this latter variety that the Lancaster county experiment has best succeeded. The seeds, which are far more farinaceous than those of the *sorghum vulgare*, together with the glumes, have been ground, and the resulting farina boiled exactly as Dr. Barton directs, with the addition of the proper quantity of milk, omitting only the butter, which in this country is not of the best quality; and I must declare, sir, that we and all our friends have found the result thereof prove *a beverage not less savoury and grateful, than wholesome and nutritious;* the farina produced being very abundant, and the mucilage full of a sharp oily substance."

Extract of a Letter from the honourable S. Hale of New Hampshire, dated Washington, January 19th, 1818, addressed to Dr. Barton.

"You will probably recollect, that, some time last spring, I wrote to you from New Hampshire, requesting you to send me some of the seed of the *holcus bicolor*. The seed you were so good as to send, were planted at Keene, N. H. in several gardens; in all they sprouted, but came to maturity in one only, and in that hardly: an early frost did them great injury. Since I arrived here, I have received a letter from Governor Plumer, who observes, speaking of this plant, "the seed I sowed grew luxuriantly; some of the stalks were ten feet high; but the frost of the 30th September prevented most, if not all of it, from coming to maturity. I intend to preserve and plant it another year."

"Have recent observations confirmed your opinion of its usefulness?"

Thus we see that this plant is becoming an object of much attention. Indeed, considering its productiveness, and the mild, savoury, nutritious, and wholesome drink that may be prepared from it; there can be but little doubt of its becoming, before long, pretty generally used in those places where it admits of cultivation.

The writer of this article has used it more than once, and can bear testimony to its usefulness. To Dr. Barton belongs the merit of bringing this plant into notice.

On Epilepsy. By Thomas Wharton.

Woodstock, Shenandoah County, Va. Feb. 3d, 1818.

Gentlemen,

I send you two cases of epilepsy which have come under my care; should you deem them worthy a place, you will give them one, if not, commit them to the flames. I am, with the highest sentiments of respect, yours, &c.

THOMAS WHARTON.

To the Editors of the Medical Recorder.

Case 1. Sometime in April, 1817, Mr. P. of this county came to my house with his daughter, (aged 2 years) whom he informed me had been subject to epilepsy from the time it was 2 weeks old. Apparently the child was in good health, and uncommonly fat. I was confident it could not be the sympathic, but the idiopathic epilepsy, from its having been taken so early in life; as the arterial system was greatly excited, I proposed bleeding from the jugular vein, to which the family refused. I was then led to another course, and knowing the powerful effect the digitalis has in breaking down the arterial action, I ordered the patient 5 drops of the tincture* morning and night, to be increased 2 drops per dose every 6 days; the bowels to be kept open with an infusion of senna and manna daily. In two weeks from the time I first saw the patient, I had the satisfaction to hear that it was relieved from its complaint, and has not had a return of it.

Case 2. June, 1817. Mrs O. of this county, on hearing of the recovery of Mr. P's child, consulted me about her son (aged 4 years) whom she said had been subject to epilepsy for 2 years past. I suspected that this originated from teething or worms, but she assured me it had cut its teeth without any inconvenience, and never had any symptoms of worms. I enquired of her, whether the child had naturally a lively disposition or not; she informed me, that it had ever been an uncommonly sprightly child, and not

* The tincture made according to the dispensatory, and dropped from an half ounce vial in a tea-spoonful of cold water.

easily frightened. I ordered it 5 drops of the tincture digitalis as above, to be increased 2 drops every 4 days; the bowels to be kept open with infusion of senna and manna. From the first day the patient commenced taking this medicine, its unwelcome visitant ceased to harrass it, and it has not had a recurrence.

REMARKS.

The above two authentic cases, afford unequivocal testimony of the usefulness of the digitalis in the treatment of epilepsy. The practice is not new; Dr. Currie speaks of the use of digitalis in mania and epilepsy, in vol. 4. article 2d. of the Memoirs of the Medical Society of London. Dr. Thomas, in his Modern Practice of Physic, mentions the use of this medicine in epilepsy, (page 280.)

EDITORS.

A Case of Phlegmasia dolens Puerperarum, or Swelled Leg, communicated by Dr. Richard M. Taliaferro.

Franklin, C. H., Virginia, Feb. 5th, 1818.

I HERE present a case for the Medical Recorder; if the editors think it worth insertion, they are at liberty to do so.

In the month of February, 1813, I was called to see a woman who had, some 12 or 15 days previous, been delivered of a child; and found upon enquiry, that she was afflicted with what is termed a "swelled leg." She informed me, that about 48 hours previous to my being sent for, a pain and stiffness were felt in the groin, near the passage of the round ligament; shortly after which the swelling commenced, and upon examination I was surprised to see the size of the limb, for it was at least double the ordinary size; it had a smooth shining appearance, and was very hot, though not red—the lochial discharge was not interrupted, nor was there much pain about the region of the womb. There were several lumps on different parts of the leg, which I supposed to be mus-

cular contractions. The pulse was remarkably frequent, at least 140 in a minute; the skin dry; smart thirst; and, in fact, many marks indicative of considerable inflammatory excitement. I immediately drew about 16 ounces of blood; gave a smart purge, and applied a large blister plaster to the groin, extending up the abdomen. Next day, my patient was no better: I therefore bled her again, ordered her to drink liberally of cream of tartar, and commenced bathing the limb with a solution of the acetate of lead. On the third day, a mild cathartic was administered; the bathing with lead continued. By this time, the increased excitement was considerably reduced, but no abatement in the pain or swelling; on the contrary, the pain appeared to be greater, for she would frequently scream out aloud on her leg being moved. My patient expressed a great desire to have her leg bathed in bitter herbs: as this was a prescription of her own, and appeared simple, she was indulged in it for three or four days; but I believe it produced an injury, and was ordered to be discontinued. I now had recourse to opium, to allay irritation, which had been very considerable from the commencement. I commenced by giving $1\frac{1}{2}$ grains at a dose, but found that quantity too small, and increased it to from $2\frac{1}{2}$ to 3 grains at a dose, which was repeated as often as occasion might require, with the happiest effects; at the same time, I commenced using the opium, I had the limb well rubbed with camphorated spirits three or four times every 24 hours; a mild cathartic was occasionally administered to prevent costiveness. This course was pursued for four or five weeks, when medicine became unnecessary; and in about three months she completely recovered.

As the birth was comparatively easy, I feel at a loss to say what produced this strange affection, unless it was "a morbid state of the parts within the pelvis;" however, I leave that part of the subject for the decision of those more learned in the profession, and have confined myself to a simple narration of the symptoms, and of the treatment.

RICHARD M. TALIAFERRO.

On the Use of Blisters applied to the Neck in Epistaxis. By J. P. Street, M. D.

Lynchburg, 18th February, 1818.

Gentlemen,

With pleasure I afford my coincident evidence with that of Dr. Archer, of Norfolk, of the good effects of blistering in epistaxis, as noticed in page 16 of the American Medical Recorder.

Last October, J. P. in a state of convalescence from a severe bilious remittent, was troubled with a hæmorrhage from the nose, three or four times a-day, for as many days, preceded generally by the head-ach. From this last circumstance, I was induced to allow the hæmorrhage to continue, and likewise use other means of depletion. But on the fourth day it was so profuse as to cause alarming prostration of strength. The usual styptic applications were resorted to, without success, when the idea of applying a blister to the back of the neck, and thereby causing a derivation of the blood from the head, occurred: it was immediately resorted to, and its success equalled my most sanguine hopes. The hæmorrhage ceased, and never again recurred. A few days afterwards, looking over Dr. Thomas' Practice, edition of 1817, I found his authority in favour of the practice. It rests with you to decide whether any further testimony is necessary.

With great respect, yours,

J. P. Street, M. D.

To the Editors of the Medical Recorder.

FOR THE MEDICAL RECORDER.

Discourses on the Elements of Therapeutics and Materia Medica. By N. Chapman, M. D. Professor of the Institutes and Practice of Physic and Clinical Practice in the University of Pennsylvania: President of the Philadelphia Medical Society, &c. &c. first vol. 8vo. Philadelphia, published by James Webster, 1817.

The appearance of this volume on the Elements of Therapeutics and Materia Medica, from a distinguished Professor of the University of Pennsylvania, has given us no inconsiderable degree of satisfaction. Medicine, like every other department of science, is progressive. Of late years, indeed, it has advanced with no small degree of celerity on the high road of improvement. Improved views of the nature and causes of diseases are daily unfolding. The Materia Medica, also, as a consequence of the former, is gradually undergoing the process of reformation. In the existing state of medical science, therefore, a work, which, uniting judicious practical observations, founded upon the present notions of pathology, with a faithful account of the known properties and effects of our remedial means, is unquestionably an acquisition of much importance.

The works of Cullen, Lewis, and Murray, although of undoubted reputation, have lost, to the American student at least, a good deal of their former interest. They abound in many opinions and theories which, in this country, are now pretty generally abandoned.

There is, however, another reason why we should wish for a new work on the Materia Medica, by one of our own physicians. Living in a country, as we do, of widely extended territory—of various soil and climate, we cannot but believe, that there are many of our indigenous products whose medicinal virtues are of real efficacy. Many of our native plants have already been found to possess the most valuable sanative qualities. We have

our indigenous cathartics, emetics, tonics, astringents, diuretics, diaphoretics, and in short, one or more articles in almost every class of remedies. It is time, then, that they should take their proper station in the body of some classical book on the Materia Medica. Professor Chapman has introduced many of our native medicinal articles into this volume, a circumstance which must render it the more valuable to the Medical gentlemen of the United States.

We will now take a cursory view of this volume, venturing, occasionally, to offer our own remarks in opposition to the author's opinions; without, however, presuming to set up our observations, as effective combatants against those which we review.

——————— tibi miles impar.

This volume comprises twenty-one discourses, they were delivered as lectures to the students of the University of Pennsylvania, during the few years that the author occupied the chair of Materia Medica in this institution. The classes of medicines treated of in these discourses, are—1. Emetics, which the author considers under the heads of mild and active emetics—2. Cathartics, divided into the sub-classes, laxatives and purgatives—3. Diuretics, divided into sedative and stimulant—4. Lithontriptics—and, 5. Diaphoretics, separated into mild and stimulating diaphoretics.

The author rejects the usual division of the Materia Medica, into nutrientia and medecines; this exclusion we believe to be a judicious one. He does not, however, by this rejection of what is unquestionably an idle speculation, mean to insinuate, that we ought to neglect the dietetic treatment of diseases, "directly the reverse," says he, "are my sentiments. To a proper regulated regimen, as a means of preventing and curing diseases, or for securing a speedy convalescence, it is impossible for any one to attach a greater importance than myself, or more ardently desiderate a work, which, coming from the hands of a practitioner of enlarged experience and sound judgment, shall exhibit the most

minute and detailed instructions for the adaptation and even cookery of food, and preparation of drinks in such cases."

After giving in the first discourse a rapid history of the Materia Medica, and in the second, an account of the methods that have been employed in improving this department of the healing art, he enters, in his third lecture, on the consideration of the modus operandi of medicines. Before commencing on this point, he gives us his notions concerning the nature of life. The doctrine which he adopts, " presumes that every animated body, animal or vegetable, is endowed with a *primordial principle* of life, and which, resident in the ova of animals and the seeds of plants, constitutes the power by which, in the first place, the various organs are moulded, developed, and perfected, and by which afterwards the animal economy is defended against the action of mechanical and chemical laws." The correctness of this opinion, concerning the nature of life, though strengthened by the concurrent sentiments of some of the ablest physiologists, is, we conceive, very problematical. We cannot put faith in that doctrine, which ascribes to the principle of life, an *active* or *operative* property. That, which distinguishes living from dead matter, we take it, is merely a *passive* quality, a *capacity* to life, or more properly speaking a law of organized matter, the result of that peculiar modification of matter termed organization. Actual life, can only be the product of the action of stimulants upon matter possessed of a capacity to be urged into vitality.

" My theory," says Dr. Chapman, " of the operation of medicines is of modern date, and alleges that they act by exciting a local impression, which is extended through the medium of sympathy."

According to his opinion, no articles ever enter into the circulation as medicines. The correctness of this position is now pretty generally admitted. " It cannot indeed be credited that any substance, after a subjection to the digestive and assimilative process, retains in the slightest degree its original properties." Medicines do not, therefore, produce their effects by entering into the blood vessels, and there " by a sort of chemical action mend the vitiated condition of the fluids." On the contrary, when medicines are

applied to the system, they produce an action or excitement in the part to which they are applied, "that extends more or less, according to the diffusibility of the property of the substances, or the degree of sympathetic connection which the part may maintain with the body generally."

Of late years it has been generally supposed, that those medicines which are ranked in the same class, as for instance, the astringents, "are all endowed with precisely the same properties, differing only in degree of force, permanency, and diffusibility of effect." This opinion does not seem to possess great claims to credit. "My impression," says the author of this volume, "is that scarcely any two agents produce entirely the same effects, and hence the infinitely diversified shades of disease, and necessity for a variety of remedies in the management of them." In a practical point of view, we consider this observation of very great importance. If we believe that medicines of the same kind, differ among themselves only insomuch as they are either stronger or weaker, we must be led inevitably to the reduction of the number of our medicinal articles; since one medicine would, by varying the dose, supply us with every possible result that could be expected from any number of articles. Besides, an opinion of this sort ought at once to put a stop to all future enquiries after new remedies. But we refer the reader to the book itself for illustration on this head.

It is contended in the volume before us, that every thing which acts upon the system is a stimulant. The whole Materia Medica, are accordingly divided by the author into two primary classes—local stimulants—and general stimulants. He acknowledges, however, that where the excitement produced by any agent is less than the natural standard of action, it may with propriety be called a sedative.

Under the head of emetics, in speaking of the application of this class of remedies to the diseases of the eyes, he says, "that many deseases of these parts proceed, probably from a disordered state of the cylopoietic viscera, but particularly of the stomach." In confirmation of this opinion he quotes the celebrated Richter. This opinion is, indeed, very commonly entertained by the modern German medical writers, and seems to have considerable claim

to credit. He might on this point, have quoted in addition to Richter, Huffland, Kæmpf, Unzer, &c. all men of eminence in medicine. Here we cannot help remarking, by the way, that both German science and literature are too much neglected in this country.

Speaking of the application of cathartics in the cure of diseases, Dr. Chapman says, "In Epilepsy I have used purgatives with the happiest effects; this practice, if not original with me, has never perhaps been pushed to the same extent by any one else." To the adoption of this practice, he was led by the theoretical views he had formed of this disease, namely, that its cause lies in the alimentary canal. Kæmpf, the author mentioned above, has given the same views of the pathology of this disease, in a work entitled "*Ueber den Infarctus.*" A French physician, of the name of Prost, has also placed the cause of epilepsy, and indeed of all the neuroses in the alimentary canal, in a work entitled, *Médecine Eclairée par l'Observation et l'Overture des Corps*, 1804, Paris. The practice, however, which Dr. Chapman deduces from this theory had, we presume, never been carried very far, before he employed it to the extent he describes.

In speaking of antimony, he says, that it has never been found in this country. Antimony is said to exist in considerable quantities at Sagherites, between Esopus and Kaatskill, in the state of New York, (see Med. Repos. Hex. 2. viv. p. 304). Drayton says it is found in the upper parts of South Carolina.*

Upon the whole, we consider this a very useful volume,—one that will, we are confident, be received with much satisfaction by the medical men of this country; the practical observations every where to be met with in this book are highly interesting. We look, anxiously, for the second volume.

E.

* Woodhous's Chaptal.

FOR THE MEDICAL RECORDER.

Vegetable Materia Medica of the United States, or Medical Botany; containing a Botanical and Medical History of Medicinal Plants, indigenous to the United States; illustrated by coloured engravings, made after original drawings done by the author. By W. P. C. Barton, M. D. Professor of Botany in the University of Pennsylvania, &c. &c. Nos. 1, 2 and 3. Philadelphia, M. Carey & Son, 1817—18 4to.

The importance of investigating the properties of our native vegetables, though generally acknowledged, cannot be too emphatically inculcated. We are aware, however, that by a distinguished professor of our own University, pursuits of this kind are considered as trifling, and productive of no manner of good. Entertaining, as we do, the highest esteem for the talents and learning of the professor, we cannot help expressing our astonishment and regret, that a sentiment so restrictive to the advancement of medical science, should be taught from his chair. If our knowledge of the Materia Medica were perfect; if we had pushed our researches as far as practicable, and acquired an acquaintance with the virtues of every plant within our reach, then, and not till then, ought we to shut the door against further enquiries of this nature. Being, however, still on the road of improvement, it behoves us to press forwards, with a generous zeal, as long as new objects present themselves to our investigation. It has been said, that "we have already a sufficient number of valuable articles in the Materia Medica, and do not require the introduction of any new ones." It is well that this opinion was not adopted by the physicians who have lived before us, else we might still purge with hellebore, and sweat with contrayerva. If it be true, and there can hardly be a doubt of it, that "scarcely any two agents produce entirely the same effects upon the animal system," then "the necessity of a variety of remedies in the

management of diseases"* is apparent. We do well, therefore, to increase the number of our remedial means; and, especially, to draw them as much as possible from productions which are indigenous to our own soil.

But independent of these considerations, as an object of general science alone, undertakings of the kind of which we are speaking, are highly meritorious. It is unphilosophical, to put the mark of disapprobation upon those pursuits which are calculated to give us information concerning the objects around us. Nature is every where liberal; every climate, and every soil, furnishes products adapted to lessen the inconveniences or sufferings of man. *Ubi morbus, ibi remedium*, is not a chimerean maxim: nor ought it to be considered an useless employment, to follow nature, and to interrogate her for those treasures which are intended, no doubt, for the use and convenience of man.

But to proceed to our task.

Three numbers of this work have now been published. They contain the medical history and description of the following plants, each one being illustrated by a splendid coloured engraving. In the first number we have, the *Chimaphila umbellata* (pippsissema); *Sanguinaria Canadensis* (puccoon); *Cornus florida* (dog-wood); *Triosteum perfoliatum* (fever wort); *Gillenia trifoliata* (Indian physic); *Gillenia Stipulacea* (small-flowered Indian physic). In the second number we have, *Magnolia Glauca* (small magnolia); *Leriodendron tulipifera* (tulip tree); *Cornus sericea* (swamp dog-wood); *Symplocarpus fœtida* (skunk cabbage); *Cassia marilandica* (American senna); and in the third number, *Geranium maculatum* (spotted crane's bill); *Gaultheria procumbens* (mountain tea); *Anthemis cotula* (May-weed); *Prinos verticillatus* (winter berry); *Lobelia inflata* (bladder-podded lobelia); *Euphorbia ipecacuana* (Ipecacuana surge).

The order of description adopted by the author, is the following: 1. Systematic name. 2. Familiar appellation; followed by the names by which the plant is sometimes known. 3. References to the authors who have noticed the plant. 4. Description of the

* Chapman's Materia Medica, page 64.

generic character, with a reference to the methods of Jussieu and Linnæus. 5. Specific character. 6. Synonima, which are very copious; and lastly, a descriptio uberior of the plant.

In the text, the author gives, first, a familiar description of the plant; and then, under distinct heads, the chemical analyses, medical properties, economical uses; and lastly, an explanation of the engraving.

In point of elegance and splendour of execution, this work does not lose by a comparison with any thing of a similar character. We cannot call it a faultless production, because that is impossible; but it requires no deviation from the line of truth to style it an elegant and highly interesting work. The engravings of the plants represented in these numbers, are extremely accurate; and the faithfulness with which the natural colourings of the living plants are given, does much credit to the talents, taste, and industry of the author.

In regard to this point, a respectable work of a similar purport, now publishing at Boston, by Dr. Bigelow, is, we think, considerably inferior to the one under review. Dr. Bigelow has not adhered to nature in the colourings of his plants. The leaves of all his plants are coloured with the same deep shade of green, giving them the appearance of ever-greens. In the general habits and structure too, Dr. Bigelow has not always successfully represented his plants. In his plate, for instance, of the *geranium maculatum*, he has neglected to represent the *very long petiolated* radical leaves; this is a very remarkable feature of the plant, and ought not to have been omitted. His plate of the triosteum perfoliatum, is also a very bad one. There is also another fault observable in almost every engraving of Dr. Bigelow's book; we mean, a neglect to represent the veiny structure of the leaves of the plants he figures. It must not, however, be inferred from these strictures, that we would under-value Dr. Bigelow's labours; on the contrary, we think them highly valuable and respectable.

We have just seen a critique on Dr. Barton's work, in the last number of the North American Review, published at Boston. It is to be regretted, that those who take upon themselves the task of deciding on the merits of literary productions, do not always en-

ter upon their duty with unbiassed feelings, or act free from the influence of sinistrous motives. The Boston Reviewer, it appears to us, began his remarks upon Dr. Barton's book, with a predetermination to use it with all the unrelenting severity he was capable of, without paying the most unbounded deference either to truth or candour. As a sample of the correctness of this critic's animadversions, we will quote his observations on Professor Barton's engraving of the *triosteum perfoliatum*. He says, "There appears to be, what we would call a botanical anachronism in Dr. Barton's drawing of this plant, (triosteum perfol.) The leaves have acquired the size which is nearly peculiar to that state of the plant in which the *fruit* is found perfect; but the plant itself bears *flowers* in the representation." Now, any one who is familiar with this plant, must know, that the leaves are large, and almost fully expanded, even before the time of flowering. It is a remarkable feature of this plant, that the lower leaves are large, while those at the top are just putting forth. As the stem shoots up, the young leaves sprout from its top. Again, he says, because Dr. Barton has quoted Dillenius, who describes the berries of this plant as being "initio virentes *postea lutescentes;*" he ought to have given them a *yellow* colour in his plate, as Dr. Bigelow has done. "It is perfectly unaccountable to us," says the Boston critic, "why Professor Barton, with such an authority, and of course the berries before him, should have preferred, in colouring his plants, an *obscure purple* to a *yellow*." We are perfectly familiar with this plant, in all the stages of its growth; and we aver, that in point of correct resemblance, Dr. Barton's is infinitely superior to Dr. Bigelow's plate. The *berries we have never seen yellow*. They are, as far as our observation has extended, always of a bright *crimson* red. The critic, we presume, is no botanist.

Dr. Barton very properly rejects from his accounts of the medicinal properties of the plants he describes, the many empirical and vague uses to which they have been applied in medicine; and gives us such information, in relation to their virtues, and their particular application to the cure of diseases as could be collected from respectable sources, in addition to his own experience. But not to dwell any longer on the particular merits of this work,

we venture to say, in a general way, that Dr. Barton is honourably and successfully engaged in an undertaking, which ought to acquire him the gratitude and praise of his countrymen.

In this sentiment, we are happy to be supported by the respectable authority of professor Chapman. "To what I have elsewhere noticed," says the Professor, "as already accomplished, may now be added a work on the Materia Medica, recently issued from our university, which, in some respects, may challenge a comparison with any similar work of Europe. These works (alluding also to Dr. Bigelow's work,) are enterprises of the highest utility to the interest of medicine, and which are well calculated, by reflecting the lights of science from the new upon the old world, to redeem, in part, the heavy literary debt we have incurred, and to vindicate the insulted genius of our country from the contumelious reproaches so long and so disgracefully endured by us."

R.

FOREIGN PAPERS, &c.

Hydrocephalic Fever.

Case of Hydrocephalic Fever. By John Crampton, M. D. Honorary Fellow of the King's and Queen's College of Physicians, Professor of Materia Medica, and one of the Physicians of Steeven's Hospital, &c. &c.

[From the Transactions of the Association of Fellows and Licentiates of the King's and Queen's College of Physicians, in Ireland, Vol. I. Dub. 1817.]

THAT rare and uncommon diseases should attract the attention of medical practitioners is by no means surprising; it is natural that such should excite a lively interest, and it is useful that they should be recorded. It is only in this way that we can collect the history of diseases of unusual character, investigate their pathology, or establish a reasonable mode of treating them.

It may be observed, however, that many diseases of daily occurrence, notwithstanding the most diligent exertion on the part of an intelligent and experienced practitioner, will baffle his skill and refuse to give way to the ordinary modes of medical treatment. Those, therefore, who can suggest any improvement in the management of diseases, a considerable proportion of which prove fatal, either by the discovery of new remedies, or by a varied application of those in ordinary use, will deserve well of the profession and of the public.

It is in this point of view, that the mode of practice in fevers has been so much ameliorated, and that the mortality incidental to such diseases, has been so much diminished; and this has been done, not by the discovery of any new specific remedy, but by a

scientific and better understood mode, in applying remedies, the medicinal powers of which have been long since appreciated.

These reflections have been suggested to me by the notes of an interesting case, which occurred to me in September last, where there was every reason to apprehend a fatal termination by Hydrocephalic effusion, but where this disease was subdued by persevering in a very active line of practice. Aware of the difficulty that attends decisions in diseases of this character antecedent to death, I have given it the name of Hydrocephalic fever in preference to Hydrocephalus. The symptoms were unusual in point of severity, and the sufferings of the patient scarcely to be exceeded. It had been my intention to have offered the history of the case sooner to this Association, but as a slight degree of mental derangement attended the convalescence, I waited the issue of this occurrence; all symptoms, however, of mental alienation have long since subsided, and the patient's convalescence has been followed by the complete recovery of his health, and the entire re-establishment of his understanding.

Case.

Master F——— aged twelve, was observed during the first week in September, 1816, to be unusually chilly; his school master attributed to idleness, his inability to attend his studies as usual, and made a complaint to his parents. On the 7th, he had distinct rigours, and complained of his head ; his head-ache was augmented by driving five miles on a car, and spending the day in the country. He struggled with his complaint until the 10th, when he was obliged to go to bed.

On the 11th, calomel and salts were given him by his parents: on the 13th, calomel and scammony. On the 15th, his fever was increased, his pulse 130, and delirium had supervened; a blister was applied between the shoulders, and the powders repeated. On the 17th, emetic tartar was added to his powders; they operated both up and down, but afforded no relief to his head, and obtained no abatement of his fever.

This was the account of his illness which I procured from his

parents, and from his medical attendant, my friend Mr. Connor, who being obliged to leave town, consigned him to my care on the 18th of September.

He had been eleven days ill; his skin was intensely hot, not much flushed; he was heavy and drowsy; his eyes prominent; light gave him considerable pain; the pupils were large and sluggish, and contracted but slowly with a strong light or a candle; his pulse about 100, not very regular, it changed its rate of frequency on the least exertion: pain in his forehead and back of the head so severe that he could scarcely bear it; he moaned constantly, and tossed his arms in every direction. On applying twenty-three leeches to the temples, shaving the head, cooling it with ice, and obtaining a few discharges from his bowels, he became cooler, his pulse at 88, but there was no mitigation to the pain in his head. In the night he was delirious; he screamed from intensity of pain in his head, shoulders and side; leeches were applied to his side on the 19th.—Towards mid-day there was a further increase of fever and of head-ache; the temporal artery was opened and suffered to bleed ad deliquium; pulse in the evening was 90 and softer, but as the head-ache was in no way relieved, ten leeches were applied to the temples, and an opiate directed.

He got some rest, but on the 20th, his head-ache was as severe as ever, pulse 120; face flushed; eyes suffused; pupils closely contracted; this latter symptom was attributed to the opium; the temporal artery was again opened this day, and suffered to bleed until he was faint; little or no impression was made on the head-ache; his cries and moans were constantly heard; tremors were likewise observed in the muscles of the mouth and the forehead.

On the 21st, after a quiet night procured by opium, twenty leeches were applied to the temples, and six ounces of blood were taken from the arm.

On the 22d, pain of the head had, if possible, increased, and extended to the occiput and back of the neck; pulse 100; twelve ounces of blood were taken from the arm, with some temporary relief, after which he remained pale and exhausted, in a quiet stupor.

On the 23d, after a quiet night from opium, says he feels some remission of pain; moans less; pulse 100, soft and regular; eyes look dim and suffused; pupils closely contracted.

24th.—He had another quiet night, pain now in the back of the head, and in the back; slight ptyalism from the mercurial medicines.

25th.—Has been in a warm bath at his own desire; head much relieved; pain now most urgent in the course of the spine, so severe as to oblige him to cry out; pulse 104, soft and regular; mouth sore.

26th—An uneasy, delirious night; increase of pain in the back; eight leeches were applied to the back, and afterwards a blister.

27th.—Pain continues in the back.

28th.—Eight leeches were again applied.

29.—Incessant moaning from the pain in his back; head-ache has returned; pulse 104; stools have become natural coloured; ptyalism continues; six ounces of blood were taken from the arm, and a tranquil state procured by opium, after the action of a purgative.

30th.—Slept a good deal, and though he moans, complains less of pain; was again in the warm bath.

October 1st.—Some sleep; was delirious towards morning; pulse 112.

2d.—Was agitated and restless in the night, the opiate having been omitted; is perfectly free from head-ache or pain in his back; pulse 90, and soft; pupils unusually large to day and sluggish;* opium with calomel again directed.

3d.—Pupils less sluggish, pulse 100; an uneasy night.

4th.—Another distressing night; pulse 100; weak and somewhat irregular; complains much again of his head; is delirious even whilst awake, and under the influence of false perceptions; appetite returns.

5th.—As yesterday.

* Whenever opium in this case was given, the pupils became closely contracted; whenever it was omitted, the pupils were dilated.

6.—Raves and appears deranged, but takes food ravenously; pulse 90; skin cool; tongue clean; salivation continues; eyes look natural; does not complain of pain.

7th.—Ravenous appetite for food continues; food tranquilizes his agitation; delirium at night is appeased by opium given in divided doses.

8th.—Less irritable.

10th.—Handed him over to Mr. Connor, who kindly superintended his convalescence.

November 12th.—Is convalescent, but foolish and strange in his demeanour.

It is unnecessary to extend the reports of this case any further, than to say that the convalescence of this patient has been followed by complete recovery. There was for some time reason to apprehend a state of mental alienation, this appearance, was however only temporary.

As to the medical treatment, in addition to the detractions of blood, calomel was given to a considerable extent, throughout the whole period of the disease, sometimes it was combined with opium and digitalis, and sometimes with James's powder; salivation was excited, cathartics, chiefly liquid preparations of senna, and glysters were constantly administered. The excessive increase of temperature in the teguments of the head was kept cool, by the continued application of ice, whilst an equable degree of heat was maintained in the extremities by fomentations and the warm bath; opium was freely used, sometimes in divided doses in combination with the other remedies, and occasionally in a fuller dose proportionate to the exigency of circumstances, and the frequency of pain.

The quantities of calomel, opium, digitalis and James's powder given in this case, I have been induced to subjoin in the annexed table, with which Mr. Meredith, an eminent apothecary of Earl street, has been so obliging as to furnish me.

		CALOMEL GRS.	OPIUM GRS.	DIGITALIS GRS.	JS. POWDER GRS.
Sept.	15	8	0	0	0
	16	8	0	0	0
	18	20	0	0	0
	19	32	1	0	0
	20	18	1	3	0
	21	48	1	4	24
	22	20	1	4	16
	23	20	1	4	16
	24	20	1	4	16
	25	20	1	4	16
	26	12	1	0	8
	27	20	1	4	16
Oct.	2	20	1½	0	0
	3	20	1½	0	0
	5	20	1½	0	0
	6	—	1½	0	0
	7	8	0	0	0
	8	8	1½	0	0
	9	8	1½	0	0
	10	—	1½	0	0
	12	18	0	0	0
	13	6	0	0	0
	14	12	1½	0	0
	15	—	2	0	0
	16	12	2	0	0
	20	12	2	0	0
	23	12	0	0	0
Total,		402	26	27	112

It has been well observed by Doctor Cheyne,* in his Essay on Hydrocephalus, that many diseases of this character take their rise from a morbid condition of the liver and other viscera of the

* Cheyne, second Essay on Hydrocephalus.

abdomen; in these views of the subject, he has been followed by Doctor Yeats,* and others. That this is the case in many instances, there is, I am convinced, no doubt; but it is equally well ascertained by anatomical observations,† of which I could adduce many examples, that hydrocephalus occurs from disease in the head, independent of any affection in the digestive organs.‡ It is right that we should be prepared to meet so formidable a disease in whatever quarter it may appear most urgent, and employ remedies which may act on the head, or on the liver, and digestive organs, according to the best view we can take of the individual case before us.

Whether the case above recited was one of primary and idiopathic hydrocephalus, or a disease symptomatic of a disordered state of the digestive organs, it is not easy to say with certainty. To form a decisive opinion on this subject, where recovery took place, is extremely difficult. This matter is the subject of doubt and difficulty every day in the practice of physic; indeed, it is only in those cases where the morbid appearances have been inspected after death, that we can be sure of the result. In the present instance, it may be observed, that the complaint began with a failure in the intellectual powers, rather than in those of the digestive organs; the pain in the head, and in the course of the spine, was too distinct and too severe to be attributed to the influence of morbid action in distant organs. The occurrence also of mental alienation on the subsidence of symptomatic fever, seems

* Yeats on Water on the Brain.

† In November 1814, a child, æt. 8. that I attended, died of hydrocephalic effusion. The abdominal viscera were remarkably sound; the morbid appearances were confined to the brain and its membranes; all the ventricles contained a quantity of serous fluid. The dissection was performed by Dr. Macartney and Mr. Ashburner.

‡ Doctor Spurzheim, on whose accuracy in anatomical researches it is unnecessary for me to expatiate, in speaking of the proximate cause of hydrocephalus, makes use of these words, "yet anatomical dissections have convinced me, that, in the greater number of instances, the morbid appearances in the abdomen are secondary symptoms of the affection of the head."

Spurzheim on Insanity, p. 57.

to confirm the idea that the head was the seat of primary and idiopathic disorder. At the same time it must be allowed, that a morbid state of the viscera of the abdomen has been occasionally known to be attended with mental derangement, and that even in many instances, no morbid appearances have been found after death, in the cerebral cavity, where mental alienation has existed antecedent to death.

As a matter of diagnosis, it may be desirable to determine, whether the head suffers primarily from idiopathic disease, or whether the symptoms are the result of morbid action in some distant viscus; it may lead likewise to some variation in the application of our remedies; yet as, in both instances, the same destructive changes are known to follow, and the same ultimate termination by effusion into the ventricles is the consequence, it is a matter of more importance to ascertain if there are any general principles to direct us if there is any mode of treatment sufficiently energetic to arrest the progress of such disorders.

The name hydrocephalus, indiscriminately attributed to acute diseases, affecting the cerebral organs, would seem to imply, that in every instance an effusion of fluid had actually taken place; such a nosological title appears to me as likely to lead in many instances to erroneous pathological views, as well as to considerable sources of mistake in the treatment. Practitioners acting on this impression, are apt to confine their efforts chiefly, if not altogether, to such remedies as promote the absorption of fluid. But as dropsy in other cavities, according to the ingenious observations of Docter Blackall,* is often preceded by inflammatory symptoms; it is not improbable, that an inflammatory state of the membranes lining the cerebral cavities, or of the exhalants which open into the ventricles, may precede the effusion of fluid; and if this antecedent state can be observed by the practitioner sufficiently early, and treated as other acute inflammatory diseases, success may probably attend his efforts.

The favourable results which followed large and repeated detractions of blood in the case just recited, should it not encourage

* Blackall on Dropsies.

us to use blood-letting in conjunction with other powerful means of acting on the vascular and exhalant systems in acute diseases, which appear to affect the head? By depleting the vascular system, and diminishing the vis a tergo, the increased action in the capillary and exhalant systems may very well be supposed to be diminished. I believe there is little doubt but that the exhalants are the source from which the ventricles are supplied with fluid in hydrocephalus. The exhalants, according to Bichat,* are the terminations of the capillaries or minute ramifications of the vascular system. If this excessive morbid action in the exhalants can be controlled, one step at least will be gained in our attempts to remove the disease; even though some slight effusion should have taken place, is it not possible, whilst the activity of the exhalants is diminished, that should the patient be able to bear the disease for a few days, and provided no disorganization in the cerebral mass or membranes has occurred, that the absorbents may carry off the extravasated fluids from the ventricles, as they do from other cavities where dropsy has taken place? Undoubtedly in addition to the oozing out of a fluid, if layers of coagulable lymph and adhesive adventitious membranes have been formed, as are often seen in morbid dissections of hydrocephalic patients, no method of cure will probably succeed.

But blood-letting is not the only remedy which I propose should be resorted to in this distressing malady. I am disposed to recommend the use of opium as employed by Dr. Cheyne, in conjunction with mercurials, especially after bleeding and the free use of cathartics. Opium,† in mitigating the sufferings of the patient, and in diminishing the morbid animal sensibility, promises to do much in saving the cerebral organs from the general destruction which awaits them; and if the patient does not recover under such treatment, his sufferings are invariably very much mitigated, nor will this opiate treatment be found to interfere with the action of purgatives in keeping up a properly regulated condition of the bowels.

* Anatomie Generale, tom. 2. p. 553.

† The utility of opiates in hydrocephalus is strengthened by a case read by Dr. Brooke before the Association.

The well known efficacy of digitalis in dropsies, naturally led to its employment in hydrocephalus; the use of it was suggested so long ago as by Dr. Quin.* Its action is generally understood to be on the renal and absorbent system and urinary organs. I have long considered that digitalis exerts a strong controlling power on the exhalant system, as it often does on the vascular system; that its power in dropsy consists as much in diminishing effusion, as in promoting absorption, and in establishing a free discharge of urine. In a hydrocephalic patient, where I had Dr. Cheyne's assistance, a few days antecedent to death, digitalis† combined with calomel and opium surprised us both; and though the case was altogether given up as lost, it almost induced the relations of the patient to entertain some hopes of recovery.

I do not pretend to suggest any new remedy in the plan of cure I propose. I am anxious only that we should make an early and a more vigorous application of the remedies we already possess. Bleeding has been decried by many as a remedy not well adapted to children, and too much caution has been inculcated in the schools on this subject, which I am sure has done much mischief. There is no class of patients, who bear detractions of blood in inflammatory complaints so well as children, or who so soon repair the loss; and there is no class of patients, where this invaluable remedy can be omitted with so much hazard in cases where it is required. In the case before us, it was often necessary to resort to bleeding a few hours after it had been determined in consultation‡ not to bleed, on account of the extreme urgency and violence in the symptoms, and their sudden augmentation; and though for some days this measure did little more than prevent the increase of the disorder, yet it seemed ultimately to subdue it.

Although I am convinced this patient's life was saved by pushing the detractions of blood as far as they could be borne, yet I am

* Quin on Hydrocephalus.

† Cheyne's second Essay on Hydrocephalus, page 47, where this case is related.

‡ I had the assistance of Mr. Richards and Dr. Mills, in the greatest part of my attendance on this case.

not disposed to undervalue the share the mercurials and purgatives were entitled to; we are all now sufficiently well impressed with the power which purgatives possess in depleting the vascular system, of course in controlling the morbid activity of the exhalants; and their general utility in febrile diseases is too well known, to render it necessary for me to enlarge on the subject.

The plan of cure, then, which appears to me to deserve attention in hydrocephalic fever, is, to take blood freely from the arm, from the arteries of the head, and by leeches at the temples, also from the side, where there is evidence of any disease in the liver; to give purgatives freely, to employ mercurials, with digitalis and other diuretics, to excite the healthy action of the liver, the mucous surfaces and the kidneys, to exert likewise that combined impression on the absorbent and exhalant systems to which I have already adverted, using opiates also to control that excessive feeling, and that morbid animal sensibility which adds so much to the distress of the patient, and which throws so many obstacles in our way in subduing so formidable a disease.

I have said nothing on the subject of blisters, or of the warm bath, which was used in this instance, as I am not attempting to give a complete view of hydrocephalic diseases, or a full account of the method of cure; a judicious practitioner will know when to resort to them with advantage; in many instances, however, blisters preclude the employment of ice, and other cold local applications to the head, from which so much more is to be attained for the patient, both as to present comfort, and eventual benefit.

A Case of Chronic Rheumatic Inflammation, successfully treated by Bandages. By Richard Grattan, M. D. Fellow of the King's and Queen's College of Physicians, in Ireland, and permanent Physician to the Fever Hospital, and House of Recovery, Dublin.

[From the Transactions of the Association of Fellows and Licentiates of the King's and Queen's College of Physicians, in Ireland. Vol. 1. Dub. 1817.]

THE frequent revolutions which medicine has experienced, both in its theory and practice, from the earliest period down even to the present moment, would seem almost to countenance the opinion, that it was a pursuit entirely destitute of any fixed or certain principles. However, to those who consider the nature of the animal economy, and the numerous circumstances which influence the actions of life, it cannot appear surprising, that doctrines the most different should constantly prevail, as well with respect to the cause as to the treatment of disease.

It is not with medicine as with other arts, in which each effect can be referred to an obvious cause, and predicted with certainty; for in the animal system a different result is often produced under circumstances apparently the same. Sometimes remedies of acknowledged efficacy are known to fail in cases to which they seemed peculiarly applicable; and frequently the exertions of nature alone are found to accomplish a perfect recovery in the most aggravated instances of disease.

In some cases of disease, from the very nature of the complaint, all remedies must prove unavailing. An active and useful remedy, when exhibited under such circumstances, therefore, often falls into disrepute; while, on the contrary, it sometimes happens that an inefficient application seems to effect a cure, because administered in a disorder which would have disappeared equally soon, and with equal certainty, had no remedy been applied. Hence arises much ambiguity, and apparent inconsistency with respect to the effects of medicines,—some practitioners extolling as invaluable the same remedy which others decry as completely useless.

In the practice of medicine, also, various modes of treatment have, at different times, casually acquired a degree of celebrity, to which subsequent experience proved that they had no pretensions. The serious injuries which must have resulted from such errors are sufficiently obvious. Either an inert practice was adopted, and the disease was suffered to pursue its course, unmitigated in violence by the interference of art, or active means were used, which, improperly applied, contributed to exasperate the very symptoms that they were intended to remove.

To prevent these inconveniences, and to afford to medicine sufficient consistency and method, the accurate report of such results as are connected with the effects of remedies, will be found, perhaps, of all other means the best. It requires, however, considerable judgment and discrimination to decide as to the claim of any particular remedy to superior merit. Indeed, when numerous medicines are employed at the same time, it becomes almost impossible to determine precisely the extent of the influence which each has exerted. In all cases, therefore, where it is attainable, simplicity of practice is desirable, and should be adopted, were it only for the purpose of placing, in a clear point of view, the efficacy and value of the remedies that we prescribe.

It would seem that sufficient attention is not in general paid to these circumstances; a neglect which has, I am satisfied, contributed more to retard the improvement of medicine than almost any other cause. Medicine, is in truth an art so completely practical, that it must ever derive its chief support from facts accurately remarked, and faithfully detailed. But to the practitioner, instances of the successful employment of remedies are the most useful of all facts, since it is only from a perfect acquaintance with the powers of such remedies that he can select and apply them with advantage. To the practitioner, therefore, the history even of a salutary cure is of importance; for though in itself, perhaps, of rare occurrence, it may, nevertheless, illustrate other diseases, or suggest reflections leading to more correct, or enlarged opinions.

The relation of recoveries, when evidently accomplished by particular remedies, has also another advantage; it must tend to confirm us in the possession of those improvements to which medicine

has already attained; and thus give to its practice a steadiness, which will secure it most effectually against the mistakes and inaccurate reports of uninformed or interested practitioners.

It would, therefore, in a great degree promote the advancement of medical knowledge, if we were more anxious to make public such practical observations as are either interesting in themselves, or can in any way contribute to confirm or correct the opinions of others. Communications having these objects principally in view, independently of their forming a valuable collection of facts, would, by the concurrent testimony of their several authors, satisfactorily establish many points, which from the want of such evidence, are at present extremely doubtful.

These reflections have occurred to me, in consequence of, I may say, the unexpected success which attended the employment of the use of bandages, in the following case of chronic inflammation of the joints.

Mrs. George Clarke, of Clarkeville, near Edenderry, in the King's county, aged about 35, of a spare habit, generally healthy, and mother of several children; nearly a year and a half ago, shortly after her last confinement, exposed herself to wet and cold, on an open car. She felt at the time no sensible inconvenience, but in the course of a few weeks, experienced a loss of power in her feet and legs, attended with a sensation of numbness. This affection continued to increase, until at last she was unable to support herself; and sometimes on attempting to rise quickly from her seat, has fallen down altogether helpless. Her feet afterwards became excessively painful, the joints of the ancles and toes were much swelled, and she was obliged to confine herself entirely to her bed.

The most eminent practitioners in the country where she resided were applied to, and by them every remedy was ordered which seemed at all likely to afford relief. The warm bath, sudorifics of various kinds, refrigerative and stimulating medicines, peruvian bark in large quantities, local frictions, and stuping of the feet, all were in succession resorted to, but without the least advantage. Her complaint every day became worse, when as a last resource,

frequent blisters were applied, and a constant irritation with a continual discharge kept up, for more than three weeks without intermission. But even this was unsuccessful. Under these circumstances, she was induced to come to Dublin, for the purpose of obtaining further advice, having, I believe, suffered under her disease for a period little short of twelve months.

When I first saw her, her condition was truly wretched. Her feet were both distorted, being permanently drawn inwards, and downwards, so as to hide completely each inner ancle, while the outer one was protruded considerably. The joints of the great toes were swelled and inflamed, the skin appearing smooth, polished, and of a bright red colour. The slightest touch produced the most exquisite pain, and the pressure even of the bed-clothes was intolerable. The only position in which she could enjoy an interval of ease, was while she sat with her legs drawn up, and supported by the upper and outer part of the feet. The pains she experienced were so severe, that she scarcely slept, and yet her appetite was good, and her general health in no respect impaired, with the exception of a slight numbness of the legs, arms, and fingers, indicating a tendency to paralysis.

As one of the first surgeons in the profession had, in consultation, pronounced her case to be hopeless, and recommended merely frictions of the feet with mustard, suggesting, at the same time, that issues might perhaps be made in the vicinity of the spine, of which, however, there was no distortion; I will candidly confess I did not myself entertain any expectation that a cure could be accomplished. However, having met with the work of Dr. Balfour, who strongly recommends the use of bandages in cases of gout and rheumatism, to the latter of which I conceived Mrs. Clarke's disease was closely allied; I thought them worth a trial, and accordingly desired that they might be applied.

The feet, previously to the application of the bandages, were rolled in soft wool, to preserve an equal and uniform pressure; they were also bathed at bed time in salt and water, which did not in any way interfere with the use of the bandages, as these were removed at night, and continued only during the day. In the course of about a week, a rapid and decided improvement was observed;

the pains were greatly relieved, the swellings of the feet had diminished, the feet had become more straight, and their skin had in a great measure resumed its natural colour. In short, by a perseverance, solely in the means that I have mentioned, Mrs. Clarke has been restored to the use of both her feet, and I am informed, is now able to attend to her domestic occupations with as much activity as at any former period.

This case, such as I have concisely related it, strongly corroborates those published by Dr. Balfour in his very interesting work; and I have been principally induced to communicate it, as the remedy which accomplished the cure admits of no doubt; the evidence of the efficacy of bandaging being rendered still more decisive in consequence of the failure of all the various means which had been previously employed.

An Account of a singular Malformation of the Human Heart. By Nathan L. Young, Esq. F. R. M. S. E, &c.

[From the Journal of Science and the Arts, edited by the Royal Institution of Great Britain.]

JAMES OSWALD, labourer, aged 49, of a sanguine temperament, was admitted into the Royal Infirmary of Edinburgh the 25th December, 1815. He laboured under Eczema Mercuriale* accurately defined. The disease supervened on the application of the unguentum nitratis hydrargyri to the eye-lids, which were affected with lippitudo, and to an ulcer on the leg. In conjunction with the cutaneous affection, the pulse was very frequent, quick, and intermittent, and variable also in frequency and strength; the heat was natural; he complained of great depression of strength and of an imperfection of the sense of touch, and his countenance was rather pale.

The peculiar state of the pulse and great depression of strength, were considered to indicate a morbid condition of the system induced by mercury, and termed by Mr. Pearson, *Erethismus*.

Influenced by the above circumstances, the remedies employed were antimonials with opium, sarsaparilla, Peruvian bark, mineral acids, nutritive diet, and cold air; by this treatment the cutaneous affection gradually got better, and before the fatal termination of the case, was almost completely cured, but the irregularity of the pulse and depression of strength continued: the pulse, however, at times became more regular and strong. On the 14th January, 1816, he had a severe febrile attack, attended with cough, difficult breathing, and universal pains, and enlargement and tenderness, stretching from the right hypochondrium to the episgastrium, which

* See Mr. Pearson's "Observ. on the effects of Var. Art. of the Mat. Med. in Lues Ven." chap. xiii. 2d edit. Erythema Mercuriale. (See Dr. M'Mullins in the Edinb. Med. and Surg. Journal, vol. i. and ii.) Hydrargyria (see Dr. Alley's Observ. on the Hydrargyria, Lond. 1810.) Mercurial Lepra (see a treatise of Dr. Moriarty, of Dublin.)

was conjectured to indicate some hepatic affection.* The febrile state was removed by a mild antiphlogistic regimen, but the other symptoms continued, and became aggravated a day or two before his death, which took place unexpectedly on the 23d inst.

On examination after death, the right cavity of the pleura was found to contain about sixteen ounces of a reddish fluid, and the upper lobe of the lung on this side shewed that recent inflammation had existed; the lung of the left side adhered generally to the pleura costalis, and the adhesions appeared old.

Ten ounces of a very red and turbid fluid were effused into the pericardium, with detached portions of coagulable lymph floating in it. The serous membrane of the heart, where it covered the appendix of the right auricle and a portion of the anterior parietes of this cavity, indicated recent inflammation, and the pericardium opposite to this part of the heart was also in the same morbid state. The heart was about twice the natural size, for a man of about five feet six inches, which was the stature of this subject. It weighed, when freed of the coagula, which were in great abundance in this case, and with its vessels cut short, twenty-eight ounces and forty-four grains. The auricles were found to form one extensive cavity, by a complete dilatation of the foramen ovale,† for the columnæ foraminis ovalis were distinctly seen, and the opening measured three inches and a half in diameter. The cavæ and pulmonary veins were enlarged in proportion to the size of the cavity; the valve of Eustachius and the great coronary vein were also much larger than usual, for the index finger could with ease be introduced into the opening of the vein: the parieties

* The pathognomonic symptoms of diseases of the heart are as yet little understood, however much has been lately added to our knowledge on this subject, by the valuable publications of M. Corvisart and Dr. Farre. Many are the cases on record, the diagnoses of which were confuted by dissections. (See Dr. Farre's Patholog.) A case is recorded in the London Med. Repository. vol. ii. p. 124, which had been considered to be a case of hepatitis. Dr. Duncan's three cases of Carditis, in the 45th No. of the Edinb. Med. and Surg. Journal, one of which was taken for a case of hysteria in the male, and the other two for inflammation of the pleura and lungs. Many other cases of the same kind may be referred to, but it would be irrelevant to the intention of this communication.

† See the plate.

tensively at some future period, I shall at present only advance them as *queries*.

What must have been the action of the heart in this case, so as to keep up that equable circulation which existed for such a length of time,* in defiance to the extensive malformation?

Does the "morbus cæruleus" depend on admixture of venous and arterial blood? What portion of venous blood is requisite?

Is it not more probable that the "morbus cæruleus" depends on languid circulation?

Is the ductus arteriosus generally found pervious in cases of the "morbus cæruleus," in combination with open foramen ovale?

Is it necessary that the ductus arteriosus and foramen ovale be open in the same subject, to constitute this disease?

Is it not probable, that a slow circulation through the lungs, which must have taken place in this case, may give rise to super-oxygenation of the blood, and hence the effect of admixture of venous and arterial blood be obviated?

Is there not an equilibrium in the action of the cavities of the heart, which in some cases of malformation compensates for natural structure, and which, as soon as it is subverted, gives rise to symptoms indicative of morbid structure?

Lastly, What are the pathognomonic symptoms of this malformation, or complete dilation of the foramen ovale, contracted ostium arteriæ pulmonalis, and extensive enlargement of the heart?

Explanation of the Drawings.

Fig. 1st. Presents a full view of the right side of the heart.

a The superior vena cava.

b The ascending aorta.

c The appendix of the right auricle, much enlarged and altered in shape.

d The inferior vena cava.

* That the malformation existed from birth cannot be doubted, but it is very probable that it was rapidly increased by the frequent inflammatory affections of the thorax which he was said to have experienced.

Fig. 1.

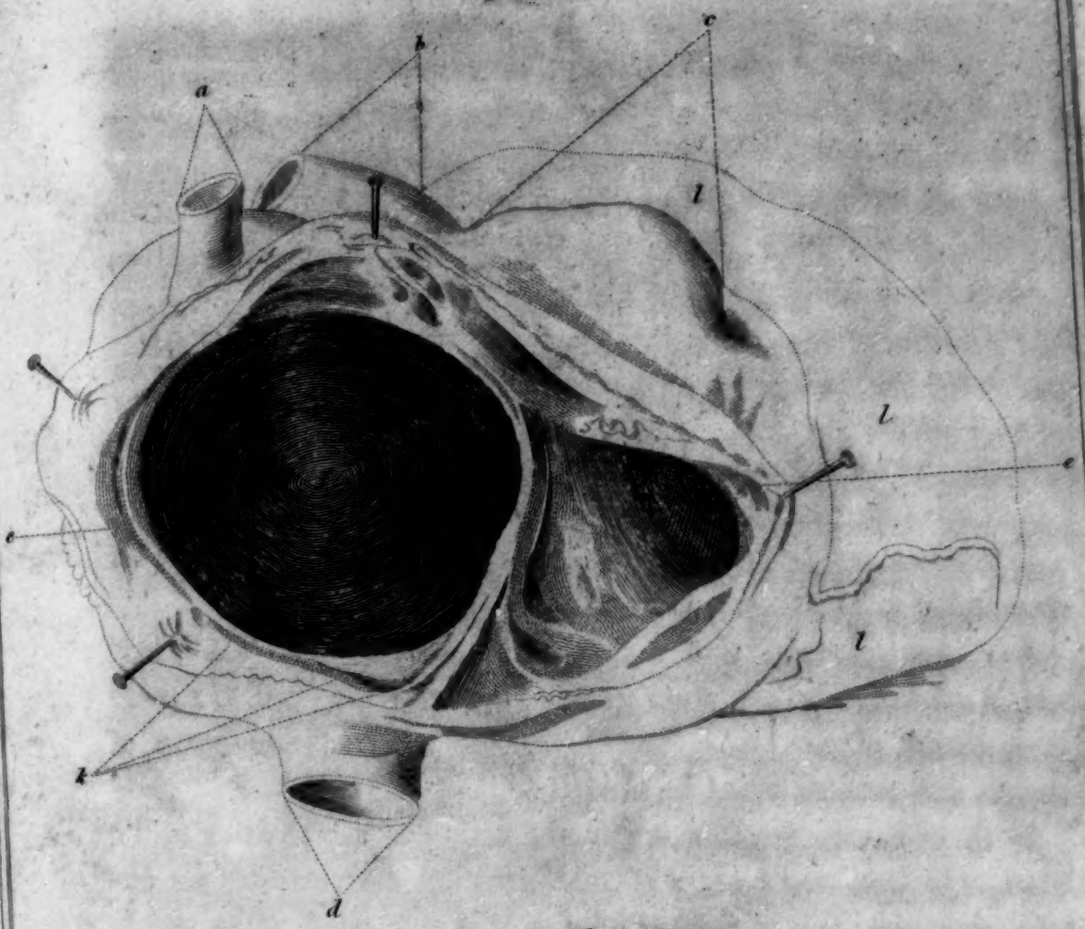
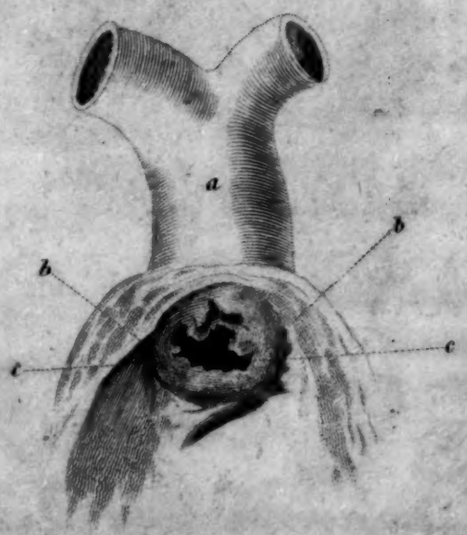


Fig. 2.



Mr. Young on Malformation of the Heart.

a e The right auricle. It is cut open and its outer section stretched out.

f The dilated foramen ovale.

g Leads to the ostium ventriculi.

h An aperture from the auricle into the appendix.

i An opening into the coronary vein.

k The valve of Eustachius.

l l l The right ventricle.

Fig. 2d. A view of the anterior part of the pulmonary artery and the irregular opening into it.

a The pulmonary artery.

b b The semilunar valves completely ossified.

c c The ostium arteriæ pulmonalis.

N. L. YOUNG.

Edinburgh, 24th February, 1816.

Rupture of the Stomach, and Escape of its Contents into the Cavity of the Abdomen. By John Crampton, M. D. King's Professor of Materia Medica, and Assistant Physician to Steeven's Hospital, Dublin. Communicated by Dr. Baillie. *With Additional Observations*, by Benjamin Travers, esq. F. R. S. Surgeon to Saint Thomas's Hospital, and Vice-President of the Society.

[From the Medico-Chirurgical Transactions.]

At three o'clock in the afternoon, October 19, 1816, Miss H. of a sallow complexion, spare habit, aged twenty-nine, was seized with a spasm, as she called it, in the stomach, which threatened immediate dissolution. She had been subject occasionally to pain in that viscus, as well as in both the hypochondria, but they generally gave way to medical treatment of a few days.

At five o'clock, when I saw her, she suffered agonizing pains in the whole abdomen; they seemed to originate from the scrobiculus cordis as a centre, and shot to the hypocondrium, to the back, and even to the shoulders. The belly was hard, the abdominal muscles being strongly contracted, but not tumid; pulse not hurried; tongue clean; bowels slow for two days; had ate her breakfast as usual, and taken oatmeal porridge for luncheon; she had no nausea or disposition to vomit, but she was anxious to take an emetic, to which I did not consent.

At seven o'clock, her pulse was 100; the skin hot; the pains were still more urgent.

At ten o'clock, the pulse was 120; much smaller; breathing quick; shortly after this capillary circulation seemed to fail.

At twelve o'clock, the pulse could scarcely be felt; the hands, feet, and knees were cold; the face livid; the breathing more embarrassed. Although her dissolution was evidently approaching, there was not the least remission of pain. She moaned incessantly; her respiration became gradually shorter; her extremities colder; her stomach never rejecting either drink or medicine; retaining her

senses and intellect perfect to the last. She gradually sunk, and expired in agony, at three o'clock in the morning.

It is unnecessary to detail the medical treatment; suffice it to say, that bleeding, both general and local, fomentations, mild purgatives, clysters in the usual form, besides those administered from a large syringe, blisters and the warm bath, were all resorted to without delay, and pushed to their fullest extent; they made no impression on the disease, nor did an opiate, given when recovery seemed out of the question, afford any respite from pain.

An examination of the body was obtained the ensuing day, thirty-six hours after death, when the following appearances presented themselves.

On opening the abdomen, the stomach was observed to be pale, flaccid, and empty, its contents, amongst which were recognized oatmeal and castor oil, had escaped into the cavity of the abdomen, through a round aperture situated on its anterior surface, at the union of the cardiac and pyloric portions. This perforation of the stomach was perfectly circular, about the size of a pea, and appeared to be the result of an ulcer on the mucous surface, which had gradually penetrated the other coats. This ulcer was hollow and circular, nearly the size of a shilling, and had the appearance as if it had been made with caustic, with the orifice in its centre.

There were extensive and recent signs of inflammation throughout the whole peritoneum, investing the intestines, which appeared as if injected, and exsudations of lymph, which connected the convolutions of the intestines to each other by adhesion. The liver and spleen appeared shrunk and flaccid, not indurated; the gall-bladder contained some yellow bile; the urinary bladder appeared empty and contracted.

Additional Observations—By Benjamin Travers, esq. F. R. S. and Vice-President of the Society.

The case of an aperture formed, in consequence of an ulcer of the mucous coat, in the stomach and intestines, and giving issue

to the contents, although not of very frequent occurrence, has been recorded by several anatomists. I have added a case strikingly similar to that related by Dr. Crampton, which occurred under my observation some years ago, and a communication or two from a friend, with a few remarks; not with an idea of affording a practical suggestion in a case which sets all art at defiance, but for the purpose of further illustrating the subject.

Case I.

Mr. ——, aged thirty-five, of a strumous habit, but enjoying generally good health, was seized, whilst dining in company, with an excruciating pain in the abdomen, which he described as unlike any he had ever felt. The principal seat of his pain, which never remitted, was the region of the navel, and it was described as occasionally shooting from this part as from a centre over his whole body, and especially affecting his neck and shoulders. His abdomen was tense and hard; his respiration somewhat agitated; his pulse little, if at all affected. Flatus rose in quantity from his stomach, but he had no disposition to vomit. At midnight, the medicine, which he had taken soon after the attack, had not operated: he was exceedingly restless, unable to bear the slightest pressure of the hand upon the abdomen, and earnestly prayed to be relieved from his intolerable anguish by death. He often called for a spoonful of gruel, which in part returned, as if deglutition was interrupted by a spasm of the œsophagus. At three A. M. the pain was not mitigated; the pulse was quick, small and fluttering. His intellect remained clear and perfect, but his strength was rapidly exhausting; his extremities became cold, and he died in the warm bath at six A. M. about thirteen hours from the attack of pain.

I pass over the formalities of medical treatment: suffice it to say, that all the obvious means of relief were perseveringly employed without sensible effect.

INSPECTION OF THE BODY.

The peritoneum was universally inflamed; recent adhesions attached the contiguous folds of the intestines to each other; a large

quantity of fluid deeply tinged with bile was contained in the pelvis; and about a finger's breadth below the pylorus appeared a circular foramen, having a peritoneal margin, of the diameter of a writing pen. It proved to be the centre of an irregular superficial ulcer of the mucous coat, including in its extent two-thirds of the ring of the pylorus. There was no other appearance of ulceration in the intestinal canal.

Case II.

Mr. ——, aged about thirty, healthy, but of dissipated habits, was seized with pain in the abdomen, while singing a song in a jovial company after dinner; he was carried home, and lived between two and three days in great and increasing suffering. Upon inspection an extravasation of the alimentary matters, mixed with the product of an acute and extensive inflammation, appeared in the peritoneal cavity, and it was discovered that the former had issued from an opening of the small intestine, which was ulcerated upon its internal surface for some space around the opening. The gentleman to whom I am indebted for these particulars, was present at the examination, but had not attended the unfortunate subject of it; and having no minutes in writing of the case, which occurred several years ago, he could not enter into further detail.

Case III.

Occurred in the practice of Dr. Farre.

Mills, a hair-dresser, had occasionally for the seven preceding years suffered sudden and very violent attacks of abdominal pain, from which he had always been speedily relieved by a wine glassful of brandy. On the day of the fatal attack, he had endured the pain without interruption, attending to his business, and in the evening went to market to buy fish for his supper. On his return the pain became intolerable, and he took the usual dose of brandy, but did not obtain from it the expected relief; he sat in a bent posture, with a sunken countenance expressive of much agony. Now

and then he vomited. He dreaded going up stairs, but at length, making a desperate effort, he ran up, and fell as he entered his room. It was evident that he was inflamed at this time, and the brandy appears to have aggravated the symptoms. He died in thirty-six hours from the commencement of acute pain; every part of the peritoneum was inflamed; a circular aperture of the peritoneum large enough to admit a crow's quill was found at the junction of the duodenum and stomach. It was the centre of an ulcer that had destroyed the villous and muscular coats of the bowel to the extent of half an inch. Coagulable lymph was effused about the pylorus, but not in quantity sufficient to produce an adhesion of the adjoining parts, so as to exclude the aperture from the cavity of the peritoneum. The margin of the aperture was deeply tinged with bile, yet the contents of the peritoneum had only the appearance common to matters effused from inflamed serous membrane. Although the unhappy man had provided himself with food, it did not appear that he had taken any; but it is probable the peritoneal sac had been injected with brandy.

A case of fatal inflammation of the abdomen, complicated with encysted tumor of the ovary, in which an aperture was formed at the centre of an ulcer in the mucous coat of the stomach, is related by Morgagni. The dissector, finding only a little serum in the lower part of the pelvis, doubted whether the opening had not been made in dissection. Upon which Morgagni offers the following satisfactory observation.

"Although I thought it but little probable, if the stomach had really been cut by the knife accidentally, that this should have happened in that part in particular, which corresponded to the middle of the ulcer; nor did the figure and magnitude of the foramen, which was almost capable of admitting a little finger, seem to be of such a kind, that they could be referred to the point or edge of the knife; yet that I might satisfy both him and myself, I examined with accuracy a second and a third time, the edges of the ulcer, and when I saw them to be not only callous but unequal,*

* I think it probable, from the description of this ulcer and of the disease of other parts, that the examiner had unknowingly detached it from an adjacent surface of adhesion, and that in fact no effusion had taken place.

and the more the foramen went towards the outside, to be comprehended in the less circumference, which two circumstances the knife could not certainly have been the cause of, by having cut from without inwards, I judged that the aperture was not to be attributed to the knife, but to disease.*

The presence of effused matters has not always been ascertained to the satisfaction of the examiners of these cases. But although the quantity and quality of effused fluids may vary according to the site and size of the aperture, and the state of the stomach, whether distended or corrugated, at and after the period of its formation, there is so little reason to doubt that effusion is a consequence, direct or indirect, of an undefended opening formed in the centre of an evasion of the mucous coat, that it is much more probable that the extravasation should have been overlooked, or, being blended with the fluid poured out by the inflamed vessels, should have been undistinguishable, than that it should not have occurred.

When upon examination of the acutely inflamed abdomen a preternatural aperture is met with in the stomach or intestines, it would be going strangely out of the way to combat the evidence of our senses, were we to attribute the inflammation to any other cause, than the escape into the abdomen of their proper contents. Death has not unfrequently been known to follow a rupture of the healthy stomach.

A tumbling boy, in performing one of the unnatural contortions of his body, was seized with acute pain in the belly, and in a few hours died in excruciating agony. The stomach was found ruptured in the middle, and a quantity of gin with fragments of apples were extravasated in the peritoneal sac.

"When," says Morgagni, "there has been an effusion of the contents of the stomach into the belly, I see that either a very speedy death was the consequence, or at least that *frequently* it was not delayed more than a very few days, if we reckon the days of the perforation from the day of the disease becoming very violent, as it happened in an observation, &c. wherein death did not follow till the eighth day, the foramen being in the upper and interior

* Alexander's Translation, Letter XXIX. Art. 16.

part of the stomach, so that it would have been very difficult for any thing that was drunk to be extravasated into the belly, unless after some time, and in particular motions of the body."* He subjoins that he uses the qualifying word "frequently," because he is aware that there are cases which convey a different impression.

The exasperation of the symptoms, I would observe, is no otherwise a sign of the perforation having taken place, than as it is a sign of effusion; so that we must suppose, to take Morgagni's criterion, that the stomach had discharged more or less of its contents into the belly, eight days before the termination of the inflammation by the patient's death, a supposition, to say the least of it, in the highest degree improbable.

Numerous and extensive ulcers from dysentery, scrofulous affections of the mucous glands and of the mesenteric, as tubercles running into abscess, &c. are met with in the dissection of morbid bodies, from which the fæculent matters have freely escaped into the abdomen. I have published three cases of this description in my work on Injuries of the Intestines. There is, in these cases, a very marked difference from those before related, in the appearance of the openings. In the first, the orifice is exclusively peritoneal, and has a thin clean border, that is, the peritoneum has been internally denuded by the destruction of a portion of the mucous coat around the aperture; in the latter, the whole substance of the intestine is included in the aperture, and the peritoneal margin is irregular, ragged, and flocculent, as if lacerated, after having been reduced to a mere shred by ulcerative absorption, to the extent of the orifice.

But it is well known that there are other and not less frequent cases of ulcer of the stomach and intestines, in which the consequence of effusion is guarded against by the adhesion of contiguous surfaces. The author just quoted refers to several such cases. I formerly published one on the authority of Mr. Norris, where an ulcer of the colon was stopped by a piece of omentum; and I have since met with similar examples.

* Loco citato.

In the body of an elderly woman I found an ulcer of the posterior and upper surface of the stomach, not apparently recent, of the size of a shilling, covered by close adhesion of the peritoneal surface at the root of the diaphragm. This was accidently discovered, and I had no means of learning the particulars of the case.

In another, a patient of Dr. Farre, in whom, he informed me, intractable symptoms of dyspepsia for many years marked the organic disease, the ulcer was so extensive as to produce the hour-glass contraction of the stomach, and to expose and open the splenic artery, which was the immediate cause of death. Effusion was prevented by the intimate adhesion of the pancreas, which was enlarged and hardened, to the ulcerated orifice in the stomach. Dr. Farre has likewise in his collection an ulcer of the stomach covered by a large scrofulous tumor, situated upon its inferior and posterior aspect. The omentum is affected with small tubercles, the result of chronic inflammation. The disease was of two years standing. I should think it most probable, that it began in the peritoneal surface, and that the mucous coat was secondarily affected.

What, it seems natural to inquire, are the circumstances which determine this important difference of result? In one case nature appears to be taken by surprise; in another to be prepared against the event, and thus to be enabled to ward off the fatal blow. In the strumous and dysenteric subjects, in whom the vital powers are reduced by a lingering constitutional disease, and the disease affecting a continuous texture, is of such extent, as must render every attempt at preservation abortive, we cannot be surprised that no trace of a repairing power should be discoverable. I have never seen a solitary ulcer of this description, nor the mucous texture healthy, within a considerable space. These appear to be lacerations of the tunics previously disorganized by ulceration, so far as I have had opportunity of examining them. Indeed the existence of six or a dozen apertures emitting the contents of the bowel at the same time, and situated distinct of each other, could not be explained but as so many mechanical læsions of an impaired texture.

The cases just described of small peritoneal aperture, with extensive ulceration of the mucous coat, are also probably ruptures. 1. They occurred soon after taking food or drink. 2. The orifice, drawn into a circular form by the elasticity of the peritoneum, is in the centre of the denuded membrane. 3. A border of peritoneum is left smooth, and of its ordinary density of texture. 4. The peritoneum is not disposed to ulceration as the mucous coat; which is especially prone to this mode of inflammatory action; and if ulceration were destroying the peritoneum, I apprehend, according to that law of pathology, which determines the adhesive thickening and barricading of parts exteriorly as the process of ulceration undermines them and advances to the surface, this defensive action would be set up. When previous disease exists, it is well known that the preservative power is less readily excited than where the general health is good. But the health of the unhappy persons, the subjects of these cases, was not obviously impaired, and I imagine, therefore, that a mechanical lesion or some other local circumstance must influence the event.

I have a case of recent occurrence to lay before the Society, which seems to me to prove that it is influenced not by constitutional, but by local causes; that it is the size and destructiveness of the ulcer of the mucous coat which excites the adhesive inflammation of the peritoneum. I have never seen a small ulcer stopped, but repeatedly a large one. The covering in, it is clear, must depend on the excitement of the adhesive inflammation upon the peritoneal surface, before the peritoneum has given way, and this I imagine will not be set up, unless a larger portion of the peritoneum is divested of its mucous coat by ulceration than happened in these cases. In the fatal cases, a very small portion only of the peritoneum is denuded, although a superficial ulceration is visible to a considerable extent upon the interior tunic. In the ulcers which have been healed, the mucous coat was probably destroyed by a uniformly progressive ulceration, corresponding to the whole extent of aperture comprehended by the adhesion. 2. The situation of an ulcer may be supposed to have some influence. These adhesions are commonly formed where the stomach rests, and is supported on fixed parts. They have generally been

formed upon the liver and pancreas. The readiness, however, with which adhesions take place between the loose but contiguous folds of the intestine and omentum, and between surfaces whose reciprocal motions are more extensive, as the pleuræ of the lungs and ribs, does not allow much weight to this argument.

Case.

An aged woman was brought into St. Thomas's Hospital, about the middle of the day, with symptoms of strangulated hernia. The practitioner who had directed her admission, had been called to visit her in the morning of the same day. He found her complaining of excessive pain, and vomiting continually. Her abdomen was tumefied and tense; her pulse small and very feeble, and her extremities cold. A small femoral hernia was found in the right groin, which with little difficulty was returned. The pain and other symptoms continued in spite of the measures adopted for her relief, and early the next day she died.

On opening the body a large quantity of fæculent matter was found in the abdomen; the peritoneum was universally inflamed, and the folds of the intestines glued together. The fæculent matter which had been thrown into the stomach by the antiperistaltic action of the intestines had escaped by an aperture of the size of a pea, situated upon its anterior aspect, near the pyloric extremity of that viscus; and upon its posterior surface, near the large curvature, was discovered an ulcer of the size of a shilling, with a raised and thickened margin firmly fastened by adhesion to the anterior surface of the pancreas. The mucous coat of the stomach was highly vascular, and points of extravasation were here and there distinctly visible.

This then is an example, in one and the same subject, of the presence and default of the *provision*, as we not very philosophically term it, of nature, or in other words, a proof of the preserving inflammation being excited by the magnitude of the existing injury, and not of that which is threatened.

I shall only add, for the information of gentlemen, whose painful lot it may be to witness cases of the hopeless nature of that de-

tailed in the paper which has called forth these observations, that the chief diagnostic signs appear to be the following.

1. Sudden, most acute, and unremitting pain, radiating from the scrobiculus cordis or the navel, to the circumference of the trunk, and even to the limbs. I may add, a peculiar pain, though I know not how to describe the peculiarity. Its tensity, like that of parturition, absorbs the whole mind of the patient, who, within an hour from the enjoyment of perfect health, expresses his serious and decided conviction, that if the pain be not speedily alleviated, he must die.

2. Coeval with the attack of pain, remarkable rigidity and hardness of the belly, from a fixed and spastic contraction of the abdominal muscles.

3. A natural pulse for some hours, until the symptoms are merged in those of acute peritonitis and its fatal termination in the adhesive stage.

Account of a Case where a Severe Nervous Affection came on after a Punctured Wound of the Finger, and in which Amputation was successfully performed. By James Wardrop, esq. F. R. S. Ed.

[From the Medico-Chirurgical Transactions, 1817.]

Pathological researches on the nervous system have been extremely limited, and perhaps less is known of the diseased changes of structure in the nerves, than of those of the other systems which enter into the composition of the human frame. The treatment of nervous affections is involved in equal uncertainty and obscurity. As in this state of our knowledge, the history of insulated cases acquires importance, the following account of a severe nervous affection which succeeded a punctured wound of the finger, and which was cured by amputation, may not be deemed unworthy of being laid before the Society.

A respectable woman about forty-eight years of age, twelve months before she applied to me, pricked the fore-finger of her right hand, near the point, with a gooseberry thorn. It was immediately followed by a great degree of pain, swelling and redness, and in a few days the inflammation extended along the finger and adjoining phalanx of the middle finger. After continuing nearly three months, during which time no suppuration took place, the pain and swelling went off, except that of the two first phalanges of the wounded finger. These remained extremely painful, and about six weeks previous to the time I saw her, her general health had suffered considerably, and she was attacked with severe nervous paroxysms. The pain in the point of the finger became excessively severe, and the skin of it so acutely sensible that she could not endure it to be touched; even the dread of any thing coming in contact with it, would make not only the finger, but the whole hand flow with perspiration; and to use her own ex-

pression, " it was so painful to the touch, she could not hold a pin betwixt the finger and thumb, to save her life." The finger appeared of its natural form, and no change could be perceived in it, except a light red spot on the skin at the point.

The nervous paroxysms usually attacked her two or three times a day, and one of them always came on at the time of her rising out of bed. During these attacks the pain extended along the finger to the back of the hand, and between the two bones of the fore-arm, darted through the elbow-joint, stretched up the back of the arm to the neck and head, producing a sensation at the root of the hairs as if they had become erect. To these feelings succeeded a dimness of sight, and the pain afterwards went suddenly into the stomach, followed by sickness and vomiting. She had constantly the feeling of a lump in her stomach, and always vomited after taking food or drink. Her flesh too was much wasted, and she had become extremely feeble.

During her illness various cooling and astringent lotions were used without any benefit; and seven months after the accident, three incisions were made into the point of the finger, which gave excruciating pain, but from which she received not the smallest benefit.

As well from her own suggestion as from the opinion I had formed of the disease, it was agreed on to amputate the finger, and accordingly this was done in the usual manner at the second joint.

On carefully dissecting the finger, no change could be detected in the structure of the nerves.

No sooner had she got into bed after the operation, than she experienced a remarkable difference in her feelings; the sensation of a lump in the stomach, and sickness which she had so long felt, immediately subsided; and in half an hour after the operation, she said that she felt for the first time as well as she had done previous to the accident, except merely a slight pain in the stump.

The greater portion of the wound healed by adhesion, and when I saw her some weeks afterwards, her general health was com-

pletely re-established, and she never had the smallest return of any of the nervous symptoms.

Of all those cases of diseased nerves, accompanied with severe symptoms, whether produced from injuries or other causes, where an attempt has been made to alleviate the disease by a simple division of the nerve, there are but few instances where such treatment has been successful; and as in many of these cases the disease ultimately proved fatal, it becomes an important practical point to decide, where the disease affects a nerve of any of the extremities, on the propriety of amputating the limb, in preference to the mere division of the nerve; an operation which may on first considering the subject appear severe, but when contrasted with the patient's sufferings, and the danger of a fatal termination, may with much prudence be adopted.

The success of amputation, where the affection is produced from an injury of the nerve, is illustrated in the case which has now been related, as well as in that published in the fourth volume of the Transactions of this Society.* Had the nerve been merely divided in this latter instance, as was originally proposed, and as was done in a similar case related by Sir Everard Home, in the Philosophical Transactions, it is extremely probable that the operation would have been attended with the same fatal result.

It has been proposed, but I do not know if the operation has ever been performed in this country, to divide the nerve of the finger affected in epilepsy, where the fit commences with an *aura*. The experience of medical men in dividing or in removing portions of diseased nerves might not have led to the anticipation of a favourable result from such an operation. I have, however, been informed by Dr. Mayer, an intelligent Hanoverian practitioner, that he saw in a case of epilepsy, where the paroxysms came on with the aura, the little finger amputated and followed by a complete abatement of all the nervous symptoms.

These observations lead me to conclude, that in cases of injury of the nerve of a limb, followed by an affection of the nervous sys-

* By Dr. Denmark, p. 48.

tem in general, it is preferable to sacrifice the limb by having recourse to amputation, than to attempt to save the patient's life by a simple division of the injured nerve.

When a nerve is injured in any part of the body, where amputation is inadmissible, the complete division of the nerve becomes the only mode of treatment which can be had recourse to. It is not a very unusual circumstance for a wound of the frontal branch of the fifth pair of nerves to be followed by amaurosis, and the complete division of the nerve beyond the injured part has restored vision. A similar operation on other injured nerves may therefore be expected to produce equally beneficial effects.

Dissections of Two Habitual Drunkards. By Samuel Black, M. D. Member of the King's and Queen's College of Physicians, &c.

[From the Medico-Chirurgical Journal, 1817.]

THERE is no tendency of the mind which it is more expedient on all discursive subjects to recollect and to restrain, than the tendency to generalize. Man is impatient to arrive at general conclusions; and the establishment of *principles* is gratifying to the pride of human intellect. But it is a tendency against which it is peculiarly incumbent on those who are engaged in pathological inquiries, or indeed in the investigation of any department of knowledge, to arm themselves with a degree of caution. This reflection is suggested by the perusal of the two following dissections: the persons who were the subjects of them, were both habitual drunkards, one would therefore expect, reasoning *a priori*, to find the appearances in both bearing a very close resemblance; but the appearances were considerably diversified. There can be no question, that the same cause, operating under the same circumstances, will always produce the same effect: but the great difficulty, for the most part is, to discern, and to ascertain wherein the circumstances under which causes are brought into operation, are the same, or different. In the present case, this difficulty does not exist to an unlimited extent. In the one case, the liver is reduced to less than half the natural size, and studded with tubercles; in the other, it is increased beyond the natural size, and studded with tubercles: but there is superadded what I consider as a real scirrhus of the stomach. Certain differences in the circumstances of these two persons are easily assigned, one, for instance, was aged 63; the other, only 27: in one, the habit of intoxication had been completely established for fifteen years or more; in the other, only for two or three years. How far this diversity of circumstances can be applied to illustrate

the diversity of observed appearances, or what share must be ascribed to other circumstances not so obvious, nor so easily assignable, I shall leave to the learned members of this association to decide: I think, however, that it may not be unsuitable, or ill-timed, to quote an observation of D. Baillie on this subject. Speaking of the common tubercle of the liver, he says: "This disease is most frequently found in hard drinkers, although we cannot see any necessary connexion between that mode of life, and this particular disease in the liver. It happens, however, very commonly, that we can see little connexion between cause and effect, in changes which are going on in every other part of the body." To which observation of Dr. Baillie, I shall take the liberty to subjoin a reflection of Cicero, "Sufficit si quid fit intelligamus, etsi *quomodo* quidque fiat ignoremus."

Case I.

July 12th, 1808.—Patrick Mooney, aged 27, a journeyman baker, and accustomed for the last two or three years, to indulge in long protracted fits of drinking, as often as ever he could command the opportunity. He had been liable, for a considerable length of time, to a variety of stomach complaints, such as acidity, flaulence, vomiting, &c. These were exceedingly aggravated about six months ago, by a long and hard drinking of rum: his feet and legs now swelled, and within the last month, he has been twice tapped. He died this morning, and I opened the abdomen twelve hours after death. The only very striking morbid appearance, was in the liver, but the state of that viscus was very remarkable: it certainly was not one half its natural size, perhaps not much more than one third; its substance, when pressed between the fingers, felt perfectly hard and rigid, and was throughout full of small hard tubercles, of the size of a garden pea, some of them larger; they were of a dark brown colour. The substance of the liver being cut into, showed its parenchyma as completely beset by these, as its external surface was; none of them shewed any tendency to suppuration. The gall bladder

had a shrunk, and shrivelled appearance, and contained scarcely any bile. The pylorus appeared rather thick, and indurated.

Case II.

June 18th, 1812.—James Finlay, aged 63, a shoemaker. He has been for the last fifteen years an habitual drunkard, and for a great proportion of that period had enjoyed better health than could have been presumed, or anticipated from his habits of life. Within the last eighteen months, however, he began to be affected with a variety of stomach complaints, such as loss of appetite, nausea, acidity, flatulence, obstinate costiveness, pyrosis and vomiting. These continued to increase, and for the last six months, scarcely any solid food could be taken, and the little that was occasionally swallowed, was almost immediately rejected by vomiting. Wine or spirits, undiluted, remained on the stomach better than any thing else. A hard tumour, or ridge, appeared now to stretch across the epigastric region, from the right to the left hypochondre, and the feet and legs became eodematous. For the last four days, he lay in such a state, that it was often difficult to say whether he was living or dead. Neither pulse nor respiration were to be discerned, except perhaps twice or thrice in the twenty-four hours, and then only by the most minute attention. This death-like state, "consanguineus lethi sopor," was at the end of four days, exchanged for a placid, but real death. Doctor Macartney, the Professor of anatomy, in this university, who was casually on a visit in the neighbourhood, had the kindness to open the body about sixteen hours after death.

On cutting through the integuments, there was a considerable serous effusion into the cavity of the abdomen. The liver appeared considerably enlarged, especially the left lobe, on the surface of which a number of tubercles appeared. These when cut into, were of the size of a hazel-nut, of a yellowish colour, and a granulated appearance, but did not contain any puss. None of these tubercles were discoverable on the surface of the right lobe; but when a section of it was made, its parenchyma abounded with them. The liver stretched quite over into the left hypochondre. The

gall bladder was pale, small and quite empty. The spleen appeared more rigid than usual, and the entire viscus was not one half its usual size; yet when a section of it was made, its internal structure did not appear very materially altered. But the most remarkable circumstance of this dissection, was the condition, and appearance of the stomach: this organ was so small and contracted, that its cavity would not, I think, have contained a turkey egg. The coats of it were thickened, and indurated in a very extraordinary manner. Their original organization seemed entirely obliterated, and they had all coalesced into a solid homogeneous substance, which in some places, was half an inch thick, in others, three quarters of an inch. This substance, in structure and appearance, resembled cartilage softened, more than any thing else I can compare it to: the pylorus, with difficulty admitted the end of the little finger, the interior surface of the stomach abounded with several appearances, to which (for want of a better) I shall give the name of fungous excrescences: some of them were broader than a ten-penny piece, and from their surface there ouzed a dirty brownish fluid.

I conceive this to be the same appearance to which Dr. Baillie (when speaking of the scirrhous stomach) alludes in the following passage:

" Sometimes the inner membrane of the stomach, throws out a process, which terminates in a great many smaller processes, and produces what has been commonly called a fungous appearance."

On the Effects of a Paralytic Stroke upon the Powers of Adjustment of the Eyes to near Distances. By Sir Everard Home, Bart. V. P. R. S. M. R. I. &c.

[From the Journal of Science and the Arts.]

THERE are no facts upon record which I am acquainted with that relate to the effects of injuries to the brain on the powers of adjustment of the eye. I have, therefore, brought forward the following, with a view to draw the attention of physiologists to this enquiry; and the numerous cases of paralytic affections which occur, afford ample opportunity of making observations on this subject.

A gentleman had an apoplectic fit in the fifty-third year of his age. He remained in a comatose state for four days: in three weeks he could distinguish his attendants so as to know them. He was completely paralytic on the right side, the eye-lids of the right eye closed, the right corner of the mouth drawn up. He lost his speech, and did not see with the left eye, although its appearance was natural. His hearing and taste good. In three months he was able to walk for two hours without resting. His face had recovered its natural appearance, except that the upper eye-lid of the right eye was not fully open. Near objects were indistinct, and he was unable to read; but a pin upon the carpet at the distance of ten feet he saw, and pointed to it for some time before any of his attendants could distinguish it, although they wanted one for his use. This led him to enquire of his surgeon, Mr. Cave, who is a pupil of mine, the reason of his not being able to read the newspaper, when he saw so small an object as a pin at that distance. Mr. Cave mentioned the circumstance to me; I stated that this patient had lost the power of adjusting his eyes to near distances, and begged of him to try whether this was the case with one or both eyes.

Experiments of this kind were made on each eye separately, placing the newspaper before one, and binding up the other; the paper was brought close, then further off, but the outlines of the print were indistinct whichever eye was employed.

On the Nature and Treatment of Tetanus. By Robert Reid, M. D. Licentiate of the King's and Queen's College of Physicians, Member of the Royal Medical Society of Edinburgh, one of the Physicians to St. Thomas and St. Mary's Dispensary, &c. &c.

[From the Transactions of the Association of Fellows and Licentiates of the King's and Queen's College of Physicians, in Ireland. Vol. 1. Dub. 1817.]

From the great want of success in the hitherto adopted modes of treating tetanus, it is evident the pathology of the disease has not as yet been clearly understood. Having been witness myself to several cases which terminated fatally, notwithstanding the variety and activity of the measures adopted for their relief, I determined to devote a good deal of attention to the subject. As it would be unnecessary here to enter into a minute detail of cases which, when compared together, would afford little or no variety from the course of symptoms usually related by writers on the disease, I shall only state the result of my observations.

It matters little, from what exciting cause tetanus may take its origin, for when once formed, whether on account of wounds, or idiopathecally, the same course of symptoms follow.

The disease sometimes comes on suddenly to a violent degree, but more generally its approach is indicated by a sense of stiffness in the back part of the neck, which gradually increases, till by degrees all the muscles of the head become affected with spastic rigidity. And owing to the great difference of strength between the muscles which close the jaw, and those which serve to depress it, the teeth are set so closely together that they do not admit of the

smallest opening. The utmost violence of spasm is not constant, but after a few minutes subsides a little; not, however, affording such relaxation in the muscles as would allow the action of their antagonists.

This affection of the muscles of the head is soon transmitted by succession to all the muscular parts of the body. But it is worthy of remark, that there are some muscular parts which resist the effects of the disease for a considerable time, and fall into the general destruction only towards the fatal period.

These muscles may be divided into two classes; the one comprehends all the muscular parts of the thoracic and abdominal viscera; and the other, all those which belong to the organs of any of the five senses.

Thus it is observed, that the natural functions are little affected, vomiting sometimes occurs, but generally does not continue. It is usual enough for the appetite of hunger to remain through the whole course of the disease, and what food happens to be taken down seems to be regularly digested; the urine is regularly secreted, although sometimes restrained, and is voided with difficulty and pain. When the spasms are violent, the pulse is contracted, hurried and irregular; but the respiration is affected in like manner, and during the remission the pulse and respiration usually return to their natural state.

With respect to the second class, we observe that the tongue retains its mobility for a considerable time; the arms, also, do not become affected till long after the lower extremities; and even when the muscles belonging to them are affected with spasms, these alone escape which move the fingers, and these often retain their mobility to the last. The head also in this disease is seldom affected with delirium, or even confusion of thought, till the last stage of it, when by the repeated shocks of a violent distemper, every function of the system is greatly disordered.

By reflecting on these phenomena of the disease, we are led to observe, that the thoracic and abdominal viscera are not primarily affected; and that the disease cannot take its rise in the nervous substance supplying these organs; for were it so, these viscera must

immediately take on diseased action. Hence it must be concluded, that the ganglionic system is not the seat of the disease. The same argument is applicable to the cerebral system, comprehending the intellectual powers, and the five senses. There are circumstances which even shew that these systems have rather a tendency to oppose this disease than to participate in its effects: thus we observe, that the tongue, which is the principal organ of taste, retains its powers of free motion, until the cerebral system becomes affected. Now we know that the gustatory nerve is a branch of the fifth pair which properly belong to the cerebral system, while the ninth pair are acknowledged to be those which supply the muscular parts of that organ, and are found to arise from the inferior part of the corpora pyramidalia to go out of the skull by their proper holes in the occipital bone. We also observe that the principal organs of touch are the hands, which are placed in the upper extremities. The nerves of touch should then in this situation oppose the effects of the disease, which we find to be the case, as I observed before, that the upper extremities remained a long time exempt from spasm, and that the fingers often continued so to the end.

Having thus explained how these two systems do not appear to be the seat of the disease, we must naturally conclude, that it rests altogether in the other system, or that of the spinal canal: every circumstance of the disease conspires to substantiate this idea. We observe, that the only parts of the body which are engaged in the disease from the commencement, are those constituted of muscles; but upon dissection there is not the slightest injury to be discovered in the structure. Now, we know, that the nerves which are distributed to those parts, and are the proper stimulants to muscular action, in the living body, all take their origin from the nervous system of the spine. It is natural, therefore, to conclude, that as we cannot discover, in examination after death, any morbid change in the parts which are acted on by the disease, we should expect to meet with some change in the parts, which afford the stimulus to muscular action: hence the disease must be seated in the nervous system of the spine.

When we come to examine the bodies of those in whom the disease has proved fatal, we can no longer have [illegible]ubt that this is the fact. The generality of writers on this disease seem to think that no morbid appearances can be detected in dissecting subjects who have been cut off by tetanus.* Indeed, Mr. Larey mentions a case, where there was a contracted state of the pharynx and œsophagus, attended with a red, inflamed appearance of the internal membrane, which was covered with a viscid reddish mucus; without mentioning any morbid state of the brain, or the viscera of the abdomen or thorax.

Led, however, by the foregoing arguments, I have examined the spinal system in a few cases of this disease. In the first two patients, the disease did not prove fatal until the fourth day: no morbid appearance could be discovered in the viscera, nor in the brain, except an increased vascularity, particularly in the membranes, but a considerable quantity of water flowed from the spinal canal, after the brain had been removed.

On the 25th of February, having occasion to visit about three miles from town, I was requested to see a boy, aged about fourteen, who, the night before, had received a severe burn in the toes of the right foot. I was informed he was a beggar, who went about the country exposed to the vicissitudes of the weather, during an inclement season, and that the evening before, he went to rest in a lime kiln, where he was found the next morning, in the state in which I saw him. Having no friends or habitation, I directed that he should be sent to the Richmond Surgical Hospital, where he remained under treatment for four or five days, when tetanus came on, and he died in thirty-six hours from the first attack. I did not, however, see him again until he was dead.

On dissection, the viscera of the abdomen and thorax appeared perfectly natural, and there was no morbid appearance in any of the muscular parts. The brain appeared healthy in every respect, except some increased vascularity in the investing membranes.

* Some, indeed, mention appearances which were evidently the effects of the disease.

Upon opening, however, the cavity of the spine from the back part, there appeared to be a fatty substance deposited in the cellular tissue, investing the dura mater, for the extent of several of the dorsal vertebræ.* On raising the nervous mass (with its dura mater entire) from the spine, there appeared a considerable effusion of blood into the cellular tissue, connecting it to the upper lumbar and lower dorsal vertebræ. A similar effusion occurred also along the bodies of the upper dorsal and two inferior cervical vertebræ. On slitting up the dura mater on the anterior surface, or that next the bodies of the vertebræ, the nervous mass appeared highly vascular, and the vessels of every description remarkably tortuous.

In the part which was situated opposite the ninth and tenth dorsal vertebræ, there appeared a whitish substance very nearly resembling the medullary matter, effused between the arachnoid coat and pia mater, occupying the space of about an inch and half, and covering about half the circumference of the nervous mass. On breaking the membrane inclosing it, I could wipe it off, and there could not be the slightest rupture discovered in the pia mater, or any of its vessels. The only appearance in the nervous substance itself, that I could discover, was a deeper tinge than natural in its cortical and medullary parts.

From the morbid appearances just enumerated, it seems evident, that the disease is of an inflammatory nature. It also would appear, that its principal seat is in the membranes investing the nervous mass of the spine, for we can observe here the peculiar characteristic of membranous inflammation in the remarkably tortuous state of the vessels of the part.

It is another remarkable circumstance in the effects of this dis-

* This, however, was natural to the part, and was noticed on account of its being absent at both places immediately over where the effusion was afterwards discovered on raising the nervous mass from the bodies of the vertebræ. Since this case occurred, I have examined several, and in very few of them was much morbid appearance observed, until the mass was raised from the bodies of the vertebræ; and this would account for some persons denying those appearances, who only view the spinal mass in its situation from the back part.

case, that when it has not been so violent as in the last case, there is a watery fluid thrown out in the spinal canal, instead of the effusion above mentioned. And this may be always expected to occur when the course of the disease exceeds the third day.

In the treatment of tetanus, the morbid appearances above related would seem, at first view, to indicate blood-letting as the principal remedy. There are, however, many arguments which would prove the impropriety of such an operation in this disease. We know that by general bleeding, the sanguiferous system of the brain is principally affected; by which means the energy of that organ may be diminished even so far as to induce syncope. Now, in relating the phenomena of tetanus, I have shewn that the nervous system of the brain seems to resist the disease. By abstracting blood, therefore, it is probable we weaken one of our most powerful antagonists to the morbid action, and thus diminish our powers of resisting the general destruction.

Experience also shows, that when blood has been drawn, it has at least done no good, and seldom or never exhibited that buffy coat which is so generally met with in all other inflammatory cases.

Hence, then, according to these views, our first proceeding in the treatment of this disease should be to apply a blister to the whole length of the spine, and to act on the bowels by powerful cathartics. We should endeavour then to produce copious perspiration over the whole surface of the body, by means of active sudorifics, particularly those recommended by Dr. Latham, in cases so well related by him in the Transactions of the London College of Physicians.*

There are many other circumstances relative to diseases of this system, which I have not yet arranged, and especially with regard to the means of judging when we are to apprehend the approach

* It is a curious circumstance that we can produce this disease by artificial means. For when an animal has been decapitated, if we instantly introduce a slender wire down the spine, so as to irritate that nervous system without compressing it, the muscles of the animal are immediately thrown into that state which is peculiar to tetanus.

of tetanus; as we know that a wound, however lacerated, will often not produce the disease, while the slightest scratch may excite it.*

* As it would have extended this paper considerably beyond the proper limits, were I to have given the whole of this subject in detail, I beg to refer the reader to a treatise on Tetanus and Hydrophobia, which I have published several months after I had the honour of laying the above before the Association of the College of Physicians in Dublin. I was induced to do this, as several misrepresentations had been circulated respecting the treatment I recommended, and even with respect to the morbid appearances observed on dissection.

Cases of Hernia Cerebri, with Observations. By Edward Stanley, esq. Assistant Surgeon to St. Bartholomew's Hospital.

[From the Medico-Chirurgical Transactions.]

It is well known that, under whatever circumstances a loss of bone may have occurred in the cranium, a tumor having its local commencement either in the dura mater, or in the brain, is liable to protrude through the aperture, and thence may continue to rise much beyond the surface of the surrounding bone.

The cases which are now offered to the society, all relate to those tumors which, having their commencement in the brain, we have been accustomed to name indiscriminately fungus cerebri, or hernia cerebri. They seem to me not without some claim to the attention of the profession; first, as furnishing additional elucidation of the pathology of the brain in general; secondly, as placing beyond all doubt, the fact, that a part of the brain itself does occasionally constitute the substance of these tumors; and lastly, by exhibiting the results of the treatment, they will afford practical information to those who may hereafter meet with similar instances.

The terms, hernia cerebri and fungus cerebri, I observed, have been applied without distinction to all protruded tumors having their local commencement in the brain, whether the mass consisted simply of coagulated blood, was an actual excrescence, formed of newly organized matter, or was a part of the brain itself. In the greater number of instances, however, in which the latter has been supposed to be the case, the opinion appears to have been founded on no better evidence than the resemblance which the tumor bore to the brain in appearance, and in presenting the phenomenon of pulsation. Direct proof, therefore, of the occasional identity cannot, I presume, be without use, if it only prevents confusion, by confining the term hernia cerebri in future exclusively

to those cases in which, as in the following, the substance of the tumor is ascertained to be really cerebral.*

Case I.

The first of the cases which I have to relate, occurred in a boy about 12 years of age, who was brought to St. Bartholomew's Hospital on Tuesday, December 15th, 1812, with an extensive fracture and depression in the back part of the skull, near to the lambdoidal suture. The depressed bone was elevated after the application of the trephine. A considerable degree of inflammatory action in the brain succeeded, which rendered it necessary to bleed both locally and generally, to a large extent. By these measures, the unfavourable symptoms gradually disappeared, and the boy ceased to complain. The wound was healthy and granulating, every thing in fact seemed to be going on well to the 10th day, when he was manifestly worse; and upon removing the dressings from the injured parts, a tumor was seen thrust up into the aperture of the bones. Having reached the level of the skull, it continued to rise slowly, so that on the third day from its appearance it had acquired the size of a small orange. The external surface of the tumor was irregular and dark coloured from coagulated blood which had incrusted upon it, but in the centre it was lighter, and here evidently consisted of medullary matter. A vapour was seen arising from its surface, and an exceedingly fœtid odour constantly exhaled from it. It exhibited regular and strong pulsations; and when pressure was made upon it, the boy did not appear to suffer pain. With the daily increase of the tumor, the symptoms of general disorder became aggravated, more particularly as they affected the nervous system: thus there was remarkable anxiety of countenance, and he was continually muttering incoherent

* In the Memoirs of Quesnay and Louis, in the collection published by the French Academy of Surgery, it will be seen that the French surgeons of that period, fully aware that the brain might protrude through an aperture in the skull, carefully distinguished the cases of real hernia cerebri, or, as they denominated them, "gonflemens, ou degorgemens du cerveau," from all other cases of tumors, arising either from the dura mater or from the brain.

expressions. Although to a certain degree insensible, he would, however, reply when strongly excited. With these nervous symptoms, a great degree of febrile disorder was combined. The tumor evidently consisting of medullary matter in its centre, and hence inducing a belief that the whole mass was formed by protruded brain, it was suggested, that the only plan of treatment by which a chance of recovery could be afforded, consisted in removing the protrusion close down to the level of the skull, approximating the edges of the scalp as closely as possible by adhesive plaster, and applying a gentle pressure to counteract the disposition to further protrusion. This plan was at once carried into effect. The whole tumor was sliced off with the scalpel. During the operation, the boy gave no manifestation of positive pain, although not unconscious of what we were doing. Considerable hæmorrhage took place from the surface of the brain exposed by the removal of the tumor, the blood being thrown with great force, and to a considerable distance, from numerous vessels, which were attempted to be secured, but ineffectually, by ligatures. After a short time, however, the bleeding increased. On examination of the part which had been cut off, its exterior was found to consist merely of a layer of coagulated blood, the rest of the mass was brain, possessing a natural appearance, the distinction between the cortical and medullary matter being readily seen, with the convolutions and pia mater dipping down between them. During the remainder of the day on which the operation had been performed, the boy was upon the whole more tranquil. For the next two days he remained much in the same state, but on the third he became worse; was completely insensible; had strabismus and a remarkable quickness of pulse. On the following morning he died.

EXAMINATION.

On removing the dressings from the scalp, the brain was seen to have protruded in a slight degree through the opening in the skull. A cake of blood was found, of about the size and thickness of a dollar, between the bone and the dura mater, near to the

seat of the injury. All that part of the dura mater adjacent to the ulcerated aperture through which the brain had protruded was black, sloughy, and much thickened. The exposed surface of the brain from which the portion had been cut off, exhibited a softened and broken down texture; a state of disorganization which extended deep into its substance. About an ounce of fœtid and dark-coloured fluid was found between the dura mater and arachnoid membrane. Several small effusions of blood were met with, both between the membranes and in the substance of the brain. The arachnoid membrane was thickened and opaque over each hemisphere. The vessels on the surface and in the substance of the brain were remarkably free from blood. The lateral ventricles were large and filled with transparent fluid, and there was some found between the membranes at the basis; so that altogether the quantity of fluid, when collected from these two sources, was very considerable. The fracture had extended directly through the basis to the foramen magnum. The thoracic and abdominal viscera were all healthy.

It is only necessary here to remark, that the unfavourable termination of this case is sufficiently accounted for by the generally diseased condition both of the membranes, and substance of the brain. Whether these effects commenced immediately after the accident, or were the consequence of the injury offered to the brain by the removal of the protruded portion, and by the subsequent compression, will perhaps be regarded as doubtful. We may, however, observe, that no increase of irritation succeeded immediately to the removal of the protrusion, and that up to the period when the protrusion appeared, the case was going on in every respect favourably. It is therefore probable, that this was the time when the diseased changes in the brain and membranes had their commencement.

Case II.

The second case occurred also in a boy aged about eleven years, who was brought to the hospital on Friday, September 3d, 1813, having fallen from a two pair of stairs window. On examination

of his head, a fracture was discovered in the upper and middle part of the frontal bone, a portion of which, about two inches in length, and one in breadth, was completely insulated and broken into several fragments, which were driven inwards beneath the adjacent bone. In order to elevate the depressed bone, it was necessary to apply the trephine, and to make use of Mr. Hey's saw. The fragments being raised, were wholly removed; and it is right to remark, that here, as in the former case, the dura mater was uninjured. The edges of the scalp were approximated as closely as possible by adhesive plaster, and a bandage was bound lightly over the wound. It may also be mentioned, that the jaw was broken near the symphysis, and both bones of the fore-arm were fractured near the wrist. Under this complication of injury, we had but little hopes of the boy's recovery. Without entering into any tedious account of the symptoms that successively appeared, it will be sufficient to state, that on the first and second day, there was little more than general restlessness, and on the third, pain in the head and delirium. Under these circumstances he was bled largely, and copious evacuations were procured from the bowels. From the use of these measures, on the fourth and fifth days, the unfavourable symptoms gradually retired, and on the sixth day every thing seemed to be going on well: the wound was healthy, and his general health rapidly recovering. On the seventh day there was no alteration in the symptoms; but on dressing the wound, there was seen projecting through the aperture in the skull, a soft substance, about the size of a hazelnut, and in its appearance resembling coagulated blood. When pressure was made upon the protrusion no pain was produced, nor was the sensibility of the body affected. The nature of the protruding tumor was doubtful. In its external appearance it resembled coagulated blood, but from the recollection of the former case, we were inclined to view it as a protrusion of the brain, with blood effused and coagulated upon its surface. By examining the base of the tumor, we could ascertain that it had passed through an opening in the dura mater, and we also noticed around its circumference the appearance of a membrane with its edges ragged and torn, which we are inclined to believe was the

remains of the ulcerated pia mater and arachnoid membrane. I this day simply applied a dossil of lint upon the swelling, and made a moderately firm pressure upon it. On the next day no unfavourable symptom had arisen, and the general health of the boy was rapidly recovering. On dressing the wound it was seen that the pressure which had been made upon the protrusion having prevented its increase in height, it had extended laterally, so that altogether it was about twice as large as on the previous day. With the impression that the tumor was formed by protruded brain, I pared off its upper part, and on examination of the portion removed, its exterior was found to be merely coagulated blood; but beneath this, it consisted decidedly both of cortical and medullary substance. The wound was dressed as before, care being taken to make firm pressure by plaster and bandage. During the next two days the same plan was continued; the boy's health still remained undisturbed, but the protrusion was evidently increasing. Since it now appeared that pressure alone was inadequate to restrain the protrusion, I this day removed the whole mass down to the level of the skull. The portion cut off consisted wholly of medullary substance. Just at the time when the scalpel was passing through the tumor, the boy complained of pain, which, however, immediately ceased. The cut surface of the brain bled freely from numerous vessels of large size. By graduated compresses and bandage, very firm pressure was again made upon the wound. During the next three days the boy did not complain, the pressure being still applied as firmly as possible. Although the tumor still rose in a trifling degree, it had by no means increased in the same ratio as before the removal of the former protrusion, and the use of firmer pressure. On dressing the wound the next day, we observed that the disposition to protrusion had ceased, and that there was such an alteration in the portion protruded, which was wholly medullary substance, as indicated the commencement of processes which would terminate by entirely getting rid of it. Hitherto the appearance of the protruded mass was that of healthy brain covered by a thin layer of coagulated blood; but from this time its character daily changed, and the alterations which ensued, seemed to be the same with those which

constitute the process of sloughing in any other part of the body. The protruded brain lost its natural colour; it acquired a light yellow appearance; was split into several portions, and there exhaled from it an exceedingly fœtid odour. Its substance daily became softer, ultimately acquiring almost a semifluid state, and in this condition the whole mass gradually wasted away. As the dead and putrid brain was detached, fresh granulations rose up to fill the vacancy, just as we see them arising from any surface from which a dead part has been separated by natural processes. In the present instance we had no doubt that the granulations were produced from the exposed substance of the brain. At length the whole of the protruded brain disappeared down to the level of the skull, and its place was occupied by the new granulations. During these changes in the tumor, which occupied a period of several days, the boy's health was good. At each dressing of the wound, moderate pressure was still made. By this means, the granulations, filling the space before occupied by the protruded brain, became daily more flattened, and at length were brought down to the level of the skull, when their cicatrization commenced, and proceeded with such rapidity, that in a few days the whole wound was perfectly healed, and the boy in every respect well.

Besides the greater interest which naturally belongs to this case on account of its favourable termination, it will be regarded with attention by the pathologist, as showing to him the several phænomena attendant on the mortification and detachment of a part of the brain, and the process of reparation. We observe that as the dead and putrid brain was detached, granulations arose from the living brain beneath, which gradually coalesced with those from the surrounding parts, and finally, that new skin was formed and invested the whole.

Case III.

On Saturday the 19th of May, 1816, a boy, aged 13, was brought to the hospital, who had on the night preceding received a kick from a horse on the right side of the forehead, and was at

the time of his admission quite sensible. Upon examination, a considerable portion of the frontal bone was found broken into several fragments, and driven inwards beneath the part of the cranium, from which it was detached. It was necessary to apply the trephine for the elevation of the depressed bone, the portions of which, when removed, left an aperture of about three inches in length and two in breadth. The dura mater had received no injury. On Sunday and Monday he complained of pain in his head, whereupon he was bled in the arm, and leeches were applied to the scalp with complete relief. On Tuesday and Wednesday he was free from complaint; but on the latter day, when the wound was dressed, the dura mater was seen to be slightly thrust upwards through the aperture of the bone. On Thursday and Friday the dura mater continued to rise, so that it was now elevated above the level of the bone, and exceedingly tense. The membrane was generally dark coloured from turgescence of its vessels, and there were distinguishable two points where it was quite black, and evidently mortified. On the next day the membrane had given way at these two points, and small protrusions of the brain had escaped through the apertures thus formed. On the Sunday, which was the eighth day from the accident, the protrusion had so much increased, that the whole mass equalled the size of a hen's egg. During the several days in which these processes were going on, there was nothing worthy of remark in the general condition of the boy. All the functions seemed to be in their natural state. We were particularly attentive to ascertain the condition of the intellectual powers, and accordingly put several questions to him, which were answered correctly. At each dressing of the wound a slight pressure by means of sticking-plaster and bandage had been daily made upon the tumor. On the ninth and tenth day the protrusion increased in the same ratio as on the preceding. Since the slight pressure hitherto made had been quite inefficient in keeping the brain within the skull, and it was conceived that a greater degree of pressure would not now avail for the same purpose, but would rather squeeze and compress the protruding mass against the cranium beneath; and further, as there was now arising considerable nervous irritation, for

these reasons it was thought advisable to remove the protruded brain down to the level of the skull, and to employ much firmer pressure than had hitherto been made. During this operation the boy manifested considerable pain. The part removed consisted entirely of cortical and medullary substance, quite healthy in its appearance. Lint was applied upon the exposed brain, and the integuments were drawn over it as tightly as possible, by plaster and bandage. It may be remarked, that the pressure which was thus made upon the brain rather increased than diminished the boy's sensibility. On the next day it was seen that the compression had prevented any further protrusion, and the surface of the brain remained flattened as it was left on the day before. The nervous system was altogether more tranquil, but there was slight accession of fever with pain in the head, for which it was necessary again to bleed largely. During the next seven days the same plan was continued, very firm pressure being repeated at each day's dressing, and no further protrusion took place. Our attention now became directed to the series of changes which were going on in the exposed surface of the brain. Apparently, by a combined process of sloughing and suppuration, the superficies of the medullary substance was gradually removed, and granulations arose from the part beneath. Granulations arising at the same time from the edges of the scalp and dura mater, they became gradually joined to those from the brain itself, till the whole wound presented one continuous and granulating surface. The only circumstances to be noticed at this period, with respect to the general condition of the boy, were a constant disposition to sleep, and insensibility to surrounding objects. As these were evidently increasing, apprehensive that they might be caused by the pressure which had been constantly maintained upon the brain, we determined to apply the bandage somewhat more loosely, the effect of which was, that on the next day the brain had again protruded even above the level of the skull. It was, therefore, evident, that, to restrain the protrusion, it was necessary to apply the pressure as strongly as before. From this time the symptoms of insensibility daily increased, and other symptoms of nervous disorder quickly manifested themselves. The boy became exceedingly restless; he

lost the power of voluntary motion over his left arm, its muscles being occasionally affected with convulsive twitches. Under these circumstances, the pressure was again left off, it being determined to leave the future progress of the case to nature so far as regarded the protruding brain. During the remaining nine days that the boy lived, the protrusion still continued to increase, and in as great a ratio as at any period of the case, so that on the day of his death the mass much exceeded the size of a large hen's egg. During the last three days, we noticed a very considerable quantity of serous fluid constantly oozing from the centre of the protrusion, whence it trickled down the cheek in a continual stream. Almost to the day of his death, the organic functions continued to be moderately well executed; thus, with a good appetite, his stomach and bowels appeared to perform their offices perfectly. The powers of his nervous system continued, however, gradually to decline, till at length he terminated his existence on the twenty-seventh day from the accident.

Upon examination after death, it was in the first place evident, that the tumor had sunk considerably from the elevation it presented during life, and was considerably lessened in all its dimensions. The aperture of the cranium through which the tumor had passed, had its edges attenuated and absorbed on the inner surface by reason of the constant pressure and pulsation of the protruded brain. Underneath the bone, there was an aperture corresponding to, and firmly united with, the base of the tumor. In respect to the tumor itself, its external surface was black and sloughy, for the granulations which had been observed upon it had wholly disappeared. A section made perpendicularly through the tumor, and through the part of the brain beneath, discovered the internal structure of both, and left no room to doubt that the tumor consisted of medullary matter, identical and continuous with that which was subjacent to it, and which constituted the right hemisphere of the cerebrum. The brain which formed the protrusion was, however, in some parts softened, and had particles of blood intermixed with it. Upon the reflection of the dura mater from the left hemisphere of the cerebrum, a considerable quantity of pus was found spread over the arachnoid membrane, and de-

posited on each side of the falx. In the same situations in the right hemisphere there were similar appearances, but in a less degree. It should here be particularly mentioned, that there existed a considerable space between the upper surface of the right hemisphere, all around the situation of the protrusion and the internal surface of the dura mater, while in every other part the brain and dura mater were in close contact, as is natural. The greater part of the substance of the brain was much changed from its healthy condition, and especially in the right hemisphere. All the medullary structure intervening between the base of the protruded part and the anterior corner of the right lateral ventricle, had entirely lost its natural structure, and had become soft and pulpy, so as to convey the idea of rottenness. Around this disorganized mass, and extending across the corpus callosum into the medullary substance forming the roof of the opposite lateral ventricle, the brain had undergone a change from its natural colour to a greyish blue, while it still retained its natural consistence. During the dissection of the brain, there flowed from the lateral ventricles and from between the membranes, in all about three ounces of serum. The fracture had extended from the frontal bone to the basis of the skull on the right side.*

In all the three cases which have been here detailed, it was clearly seen to be a part of the brain unaltered in structure which was protruded through the opening of the skull. But it will be naturally asked, to what particular circumstances are we to attribute the disposition of the brain to protrude in some instances, and not alike in all, where there is any loss of bone from the cranium? Although it may not be within my power to afford such information, with respect to this point, as will be thought quite satisfactory,

* The fact may be worth noticing, that, notwithstanding the boy lived a month after the accident, yet there did not appear to be any thing like a process of union going on in the fractured basis of the skull. In the first volume of the Memoirs of the French Academy of Surgery, there is a case related by M. Duverney of a man who had a fractured basis, and who lived for three months afterwards, in which it is particularly mentioned, that there was no attempt at the union of the broken bone, notwithstanding so long a period had elapsed since the accident.

and such as will justify any positive conclusions, yet there are some circumstances bearing upon the subject that may not be thought unworthy of consideration.

It cannot be simply the want of confinement and resistance from the loss of bone that gives rise to the protrusion of the brain; since it ought then to occur as an invariable consequence of an aperture being made in the skull. There must be besides an increase in the volume of the contained parts, produced either by a general distension of the blood-vessels of the brain, or by the addition of some new matter, as of water or pus. It is an opinion which I have heard stated by many, that it is the increase of volume in the brain, consequent on that determination of blood to its vessels which is known to occur from the excitement of inflammation, that occasions a part of the organ to be forced through the opening of the skull. If this were the cause of the protrusion, it ought uniformly to appear at the period when inflammation exists in the highest degree; but in the cases here related, and the remark also applies to the other instances on record, the protrusion took place when the inflammatory action was on the decline, and when therefore it was more likely that the contents of the skull would be increased by effusion of water, either into the ventricles, or between the membranes of the brain.* Still however it is of consequence with reference to practice, that we do not lose sight of the influence which a distended state of the vessels of the brain may have in causing, and will certainly have in augmenting, the protrusion when it has once occurred. Something more may also be said respecting the causes upon which such distension of the vessels may depend; for besides the active

* In a case related by M. Quesnay which was under the care of Peyronie, where the protrusion was ascertained to be brain, it did not occur till several days after the accident, at the time when the wound was in a state of suppuration. Mem. de l'Acad. Roy. de Chir.

In a case which may be found in the 1st volume of the Medical Commentaries, it is stated that the brain protruded on the fourth day.

In a case published in the 9th volume of the Edinburgh Medical and Surgical Journal by Mr. Pring, it is stated that the protrusion, which was decidedly brain, first appeared about a fortnight after the accident.

determination of blood attendant on inflammatory excitement, it is also to be recollected to what an extent these vessels will suffer distension, as it were passively, in consequence of obstruction to the return of blood from the brain to the heart, under any circumstances of forced or violent performance of respiration. It is well ascertained, that besides the regular motions which the brain exhibits upon exposure of its surface, corresponding to the pulsations of the large arteries at its base, it will also suffer elevation and depression, when respiration is performed with difficulty, and corresponding to each expiratory and inspiratory action. In the second of these cases related in this paper, we made the following observations with relation to this point. When the boy was lying quietly in bed, the motions of the protruded brain accorded regularly with the pulsations of the arteries in the other parts of his body. When he rose, the tumor instantly sunk to a certain degree, probably from the blood being then returned more freely from the head than when he was in the horizontal position. When he was desired to hold his breath, the nostrils being at the same time closed, no alteration in the tumor was produced. In the inspiration preceding the act of coughing, the brain sunk; but in the instant of the forcible expiration, it was again driven upwards with great force.* In order to show still more satisfactorily the great power, with which the distension of the vessels will operate in elevating the brain under a violent performance of repiration, I may here introduce the following case from the second volume of the Edinburgh Medical Essays. A young woman suffered a fracture of the cranium with depression, which required the application of the trephine. In three months the wound had healed, and

* Blumenbach mentions an instance which fell under his own observation, of a young man eighteen years of age, who when five years old fractured the frontal bone. Since this time there had remained an immense hiatus, covered merely by a soft cicatrix. The depth of this hiatus varied according to the state of the respiration. During sleep, and when he retained his breath, it was very deep; but in a long continued expiration, it became much shallower, the cicatrix even rising into a swelling. At the bottom of the hiatus, there could be seen a pulsation synchronous with the pulsations of the arterial system.—Institutiones Physiologicæ.

the girl was quite recovered. Seven months after, the hooping cough became epidemic at the place where the girl resided. She caught the affection, and during a violent fit of coughing, the cicatrix in the scalp was lacerated, the dura mater torn, and the brain pushed out at the wound. The surgeon being sent for, he found two ounces of brain lying upon the head. Paralysis of the limbs ensued, and in five days the girl died.*

Such then being the power with which the whole mass of the brain will suffer distension under any circumstances of forcible respiration, as in crying, coughing or straining, (either of which is so likely to happen,) it must be immediately perceived how much the effects resulting from this distension of the vessels will be augmented, if there should by chance be at the same time the smallest quantity of fluid effused, either between the membranes,

* I am fully aware of the uncertain opinions which exist even at the present day concerning this subject of the motions of the brain. I have in this paper simply stated the phænomena that were seen by numerous other individuals as well as by myself. If I might add any thing in allusion to the experiments and observations of physiologists with reference to this subject, I should certainly say, that by the experiments of Schlichting, Lorry and Lamure, recorded in the Memoirs of the Academy of Sciences, and by Haller's experiments detailed in his Opera Minora, it is unquestionably proved, that the brain will, under certain circumstances, exhibit distinct motions of elevation and depression, corresponding to expiration and inspiration, besides those motions imparted to it by the pulsations of the arteries at its basis. The extent of these motions in the brain connected with respiration will depend on the state of the vascular system generally, and on the manner in which respiration is performed. When this function is executed naturally, the obstruction to the return of blood from the head to the heart, in the instant of expiration, is not sufficient for the distension of the vessels of the brain to such a degree, as to cause a distinct elevation of the organ, when its surface is exposed by the removal of a part of the skull. On the other hand, all the experimentalists concur in stating, that with a hurried and irregular respiration there is a distinct elevation of the brain attendant on the expiratory act, the brain in inspiration relapsing into its former state. One kind of motion in the brain is an actual elevation of its whole mass by the pulsations of the arteries at its basis; the other motion connected with respiration, is caused by the distension of the veins of the brain operating upon the organ with so much power, that its surface is elevated and depressed when exposed by the removal of a portion of the cranium.

or into the ventricles of the brain. I have already alluded to the circumstance of the protrusion constantly appearing upon the decline of the inflammatory action, and consequently when it is probable that there would be serous effusion in one or both the situations just mentioned. I may here also refer to the dissection of the two fatal cases given in this paper. In the one, there was found a considerable quantity of fluid in the several parts of the brain; and in the other, about three ounces of serous fluid escaped during the examination.* Under such circumstances, we may not be surprised at the occurrence of such phænomena as are here recorded to have ensued after the removal of a portion of bone from the cranium, that the dura mater, notwithstanding its firm and resisting structure, should be thrust into the aperture, until at length from distension the membrane mortifies at some points, and the brain protrudes through the openings left by the separation of the dead portions. The brain being now freed from the restraint of the dura mater, is forced out in greater quantity and more rapidly, so that in one instance the protruded mass in twenty-four hours equalled the size of a large hen's egg.

In making these observations on the causes that may contribute, or even alone be sufficient, to produce the cerebral protrusion, my object has been principally with reference to the practice of surgery; since it must be obvious, how important it is for a surgeon to comprehend the circumstances that may occasion the brain to be forced out of the skull, from the knowledge of which he will be naturally led to the means of its prevention, and to the proper treatment, when it has already occurred.

When it is stated that, of four cases which have occurred at St. Bartholomew's Hospital within seven years, where the patients have survived some time after a considerable loss of bone from the

* In the account of this case it is mentioned, that during the last three days of the boy's life, a very considerable quantity of limpid fluid was constantly oozing out from the centre of the protruded mass of brain. There is little doubt but that this fluid came from the lateral ventricles, although from the softened, and as it were rotten state in which we found all that part of the brain intervening between the base of the tumor and the ventricle, we were not able to discover any distinct channel of communication between them.

skull, in three, protrusions of the brain succeeded, it will be admitted to be an object of importance that the surgeon should have in view the probability of such occurrence, and should adopt every measure that might have the least influence in preventing it. It would certainly be advisable in every case of fractured skull with loss of bone, that from its commencement, the place of the bone that has been removed should be supplied as efficiently as possible, either by tight bandage, or by some other means that would afford a resistance to the exposed brain, equivalent to that of the skull itself. At the same time, the greatest attention should be given to prevent the least increase in the volume of the brain, either from distension of its vessels, or from serous effusion, the natural consequence of inflammation.*

It is perhaps scarcely necessary to observe, that when the protrusion of the brain has taken place through the aperture of the dura mater, the employment of pressure with the view to effect its return into the skull is entirely out of the question. I feel confident that pressure is unequal to accomplish this. Understanding then that the necessary means of cure consist in getting rid of the brain already protruded, the surgeon has to consider whether he will at once remove it, that he may then make such efficient pressure as will prevent further protrusion; or whether he will await the event of the natural processes, which, it is likely, will at some period be commenced for getting rid of the protruded brain, and restoration of the injured parts. I must certainly confess myself unable to determine which is the best plan of treatment, only one of the three cases here recorded having terminated favourably. Under such circumstances, it will be better not to advance beyond the simple details of facts; and from the evident utility of exhibit-

* A case is mentioned by M. Quesnay, where a patient, after being cured of an injury of the head attended by loss of bone, was subject to convulsions and loss of understanding. It was conceived that these ill effects might arise from the constriction which the convolutions suffered from being pushed into the aperture of the skull; accordingly, to counteract this, a pad was applied upon the cicatrix, and the convulsions did not recur. The event therefore seemed to justify the supposition respecting their cause.—Mem. de l'Acad. Roy. de Chir. Tom. xi. 12mo.

ing together a number of facts, all having the same tendency, I shall here briefly refer to such of the histories on record as may illustrate this part of the subject.

An interesting case is told by Van Swieten* of a boy fourteen years old, who was struck upon the frontal bone by a ball of wood. He immediately fell down and vomited. Two months after, on account of unfavourable symptoms, the skull was perforated, and pus rushed with great impetus through the aperture in the bone. The brain itself soon afterwards began to make its way out. It not being found possible to restrain the protrusion, the whole mass was cut off by means of a thread carried through its base. The protrusion was quickly reproduced, and was again removed by the same method. The same process was several times repeated, until the mass removed equalled the size of a large orange. The protrusion now ceased, and the boy recovered.

In the Memoirs of the French Academy of Surgery,† the following equally interesting case is related by M. Quesnay. A young man received a blow from a stone on the right parietal bone. The skull was fractured, and the brain wounded. On the next day, the patient had convulsions and paralysis on the opposite side of the body, with fever and delirium. The injured brain became black, swollen, and softened, and protruded through the aperture of the bone. The surgeon daily removed some of the projecting brain. On the 18th day, the patient falling by accident from his bed, all the protruded gangrenous brain was detached, and found in the dressings. The swelling of the brain still continuing, more of its black and gangrenous substance protruded through the aperture and was, daily cut off. On the 35th day, the patient, in a state of drunkenness, seized with his hand the mass of protruded brain, and tore it away with violence. On the next day, M. Quesnay states, " On trouva le cerveau en meilleur etat, presque tout ce qui etoit corrompu etoit emporté, et on s'apperçut qu'on etoit proche du corps calleux." It is further stated, that the exposed surface of the brain now became red, instead of black, and the patient gradually recovered. The paralysis, however, still re-

* Commentaria, Tom. i. p. 440.

† Tom. xi. 12mo.

mained, and he was subject to epileptic motions, but his intellect was quite perfect.

In the Medical Commentaries there is a case, already referred to, in which it is stated that the protrusion of the brain, which began on the 4th day, gradually increased till the 14th, when it spontaneously dropped off in pretty large pieces, no other treatment having been adopted than that of dressing it with dry lint.

In the case published by Mr. Pring in the Edinburgh Journal, the removal of the protruded mass, and the employment of pressure, effected the cure in a case which was regarded as an example of the real hernia cerebri or protrusion of the brain itself.

The next case which I shall mention occurred lately under the care of Mr. Jos. Taylor, surgeon to the forces, who obligingly presented the statement of it to Mr. Lawrence, to be laid before the society, or to be used in any way he might think proper.

Case.

"A boy of ten years old received a kick of a horse on the left side of the head, which produced a wound extending from the top of the ear obliquely upwards and forwards: it happened on Monday morning, ten miles from town. He had vomited much, and blood was discharged from the nose and ears; he had been blooded soon after the accident, and had been since much disposed to sleep. Such was the account from his friends.

"On Wednesday morning I first saw him; he was comatose; his pulse was slow, full, and intermitting; his bowels were bound; respiration somewhat stertorous; skin remarkably dry, cool, and rather scaly; his features were pale and shrunk. The head being uncovered, I could perceive without the help of any instrument, a fracture running in the direction of the external wound, the bone bare and depressed fully the thickness of the skull itself. The operation of the trephine appeared to be the only alternative, and I commenced it by an incision from the centre of the original wound backwards as far as the depression extended, which was more than an inch, thus forming two flaps, which being turned backwards, the extent and scite of the injury became conspicuous.

"An irregular triangular portion of the parietal bone was insulated and depressed throughout: this, by the operation of the trephine, was removed. The dura mater was covered with clotted blood considerably beyond the extent of the fracture; beneath the insulated portion of bone it was not, but near the centre of this part some turgid vessels appeared, somewhat in a radiated form. After cleansing the wound, it was dressed with adhesive plaster; the boy was ordered a purging injection, and put to bed. In the evening, his pulse was more regular; except that change, however, the symptoms were not perceptibly relieved.

"Next day he was restless and impatient, instantly falling into a comatose state, and as suddenly starting out of it; his respiration and pulse were a little relieved, but still irregular; skin remarkably dry, and covered with furfuraceous scurf; the natural functions seemed almost suppressed. He was ordered some purgative medicine, which produced a few stools; he used the aq. ammon. acetat. without any sensible effect. His friends would not (from a superstitious obstinacy) allow him to be bled.

"On the second day, there was no remarkable change; and on the third from the operation, the dressings were removed. The discharge was in considerable quantity, but thin, and the wound had a loose and flabby appearance; the vessels on the dura mater seemed more distended; the wound was dressed as before.

"On the fourth day, there appeared a slight paralysis of the right side of the face; the wound was daily dressed, his bowels regularly relieved by clyster, but he continued in that restless stupid state till the eighth day from the operation. He could not be roused by his attendants, but on any loud noise would screech wildly, and attempt to jump out of bed, falling again suddenly into stupor and muttering delirium. His tongue was now paralytic, and his speech, when induced to speak, indistinct; the secretions still continued almost suppressed, and the pulse had become frequent and weak. In his fits of restlessness he would often attempt to tear off the dressings, and the motions of his hands were constantly directed to the head. On the eighth day, whilst being dressed, he passed his urine involuntarily. In the evening of this day, his father came to tell me that his son was much better, hav-

ing slept quietly for some hours; that he had not screeched nor been troublesome; had asked for bread, and ate it freely; had enquired about home, and where he was, and talked of circumstances which had occurred previous to the accident, as of yesterday; that he had had a copious motion of the bowels, and was perfectly quiet and easy. I immediately visited him; found the lad perfectly sensible and sitting up; his pulse was fuller, slower, and more quiet; his skin had not so much the dry scurfy feel before observed; it was softer, and attended with a degree of general warmth over the whole body; his features were more full, but the paralytic affection, though less perceptible, still remained.

"The next morning, on removing the dressings, I observed the dura mater ruptured at the spot where the turgid vessels were remarked, and turned back by the protruding brain about the size of the end of a moderate hen's egg; it was of a natural colour, and appeared perfectly healthy. He was now quite sensible; when spoke to, he answered distinctly and without hesitation; the pulse was soft, full, and regular; respiration natural; he had had some copious motions by the bowels, and complained of hunger; a thick brown scurf appeared separating from the tongue and lips, attended by a profuse discharge of saliva.

"The wound was as usual dressed with adhesive plaster, the strips being made to cross each other over the protruded portion of brain previously covered by the flaps of scalp. I observed, however, that when the strips were applied so tight as to compress the brain to a certain degree, the boy became restless and stupid until they were removed or had slipped.

"The wound now assumed a healthy and firm appearance; it healed rapidly, and in three weeks from the operation the boy was playing at marbles with his companions."

It will now be obvious, from the observations and facts which have been here referred to, that in whatever manner a case of Hernia Cerebri may arrive at a favourable termination, there must inevitably be a loss of brain proportionate to the extent of the protrusion. It would formerly have been a matter of interest to ascertain the condition of the intellectual functions in such indi-

viduals; but now, when the records of medicine abound with instances of recovery after the loss of considerable portions of brain, it is unnecessary to make any further observations with reference to this point.*

The question naturally presents itself, whether in the individuals who have recovered after the loss of a part of the brain, there is any regeneration of the cerebral substance; or, if there is not, what are the changes occurring in the contents of the skull, by which (as must necessarily be the case) the cavity still remains accurately filled? The only facts with which I am acquainted, illustrative of this point, are deduced from the experiments of Struemann, referred to by Sœmmering,† who gives an account of the different effects which were noticed after the loss of portions of brain in various animals, and then describes the appearances which were seen in the brain, when it was examined some time after their recovery. He states that there arises from the exposed surface of the brain, a new substance of a yellow colour, thinner and softer than genuine brain, from which it may be clearly distinguished, and at the same time there remains an accumulation of fluid in the ventricles. In this way, the vacancy which would otherwise be occasioned by the loss of brain, is partly supplied by the growth of new matter, and partly by the enlargement of the ventricles, from accumulation of fluid within their cavities.

The drawing which accompanies this paper, represents a preparation of the hernia cerebri from Case III. It exhibits a vertical section of the protrusion, and of that part of the brain from

* In the 2d volume of the Memoirs of the French Academy of Surgery, there are two cases where the patients lost each a mass of brain, equalling a hen's egg, and yet recovered with perfect intellect.

Haller quotes an abundance of cases, from his own observation and from authors, where individuals lost a considerable quantity of brain, or have had various diseased changes occurring in the organ, such as gangrene, suppuration, &c. and have recovered without impairment of the intellectual faculties. Haller remarks, "hæc adeo frequenter ita eveniunt, ut cerebri vulnera, et jacturas symptomata facere negent cl. viri."—Elem. Phys.

† De Corp. Human. Fab. tom. iv. p. 113 et seq. note.

which it has arisen. The tumor preserves its original characters sufficiently to show that it is formed by brain. In its centre, the vessels had given way, and particles of blood are here consequently intermixed with the cerebral substance. The portion of the skull surrounding the base of the tumor, and the membranes of the brain, were included in the section for the purpose of showing how the protrusion has taken place through the openings formed by ulceration in the dura and pia mater, and through the aperture in the bone which was caused by the removal of the fractured portions.

The following interesting case, of which the details are communicated to the Society by the direction of Mr. Pearson, will show that protrusions of brain may occur under circumstances very different from those of the foregoing examples; and hence may perhaps assist in correcting our opinions respecting the conditions essential to their occurrence.

Case.

William Whittle, aged 20 years, was admitted a patient of the Lock Hospital, November 12, 1812. He had at that time a node on the os brachii, a similar appearance on each tibia, and a tumor on the forehead, which apparently contained a fluid. There was also an ulcer on each of the tonsils, and he complained of severe pain in his head and in his limbs.

The account which he gave of his complaints before his admission into the hospital, was the following: that he had contracted a chancre on the penis two years ago, for the cure of which he had employed some mercury; that he had been very irregular in the use of this remedy; had exposed himself to the hazard of renewed infection frequently, while under this course of medicine, and had never guarded himself against the cold and humidity of the weather. He had suffered from suppurating buboes, which were now healed; he had been afflicted with pains in his limbs about eight months anterior to his application at the Lock Hospital, and the ulcers on his tonsils had existed about two months. He was directed to take a compound decoction of sarsaparilla, to use the

hot bath, and to take opium every night. In the period of about a month, the ulcers in his throat were healed; his pains were much relieved, and the several nodes on his extremities had subsided partially. Towards the end of December the nodes began to increase and become more painful; he was therefore ordered to commence a gentle course of mercurial frictions. He rubbed in a drachm of the weaker mercurial ointment every night, with scarcely any intermissions, from December 31 to March 15; his mouth was affected moderately during the greater part of this period. The tumor of the forehead had been several times punctured, and a small quantity of fluid somewhat thicker than serum was discharged by each operation. No permanent advantage resulting from these repeated evacuations of the tumor, it was divided by a free incision on March 15th, and a large portion of the frontal bone was exposed in a carious state. The cavity was dressed with dry lint, and there was a copious discharge of fetid pus at every dressing. On May 4th, symptoms of compression of the brain came on suddenly. He was attacked with rigors which recurred at short intervals; stertorous breathing; his pupils were largely dilated, and he became comatose. He was bled copiously and took a purgative, and fomentations were applied constantly to his forehead. All these alarming symptoms subsided in about twelve hours. He experienced another attack of these complaints on the 12th of May, which were completely removed by a recurrence to the preceding mode of treatment. He had no return of these threatening symptoms; and on the 15th of July, the carious bone having become tolerably loose, was removed easily by the forceps. The surface which was exposed by the removal of the bone, exhibited the appearance of a diseased, dark-coloured mass, projecting beyond the level of the opening in the bone. This tumor increased in bulk very gradually, and as the dark-coloured sloughs separated, the substance assumed more the appearance of flesh somewhat vascular, accompanied with a regular and visible pulsation. At this period, the health of the patient was tolerably good, his appetite unimpaired, he lived on the common hospital diet, and required very little medicine. A moderate degree of pressure was applied to the tumor by compress and bandage; no

ill effects ensued from it, neither was any sensible benefit derived from it. One night he accidentally struck his head with some violence against the wall of the ward, by which a considerable portion of the tumor was broken, and rendered so loose, that it was thought proper to remove the pendulous portion of it with the scissors; no bleeding of any consequence followed, but the discharge of about a table-spoonful of a fluid, resembling that which is found in the lateral ventricles of the brain, succeeded the excision of the injured mass. As the tumor continued to increase in bulk, a strong ligature was carried round its base, and tightened gradually every day; but no visible change was consequent on this application, for the tumor continued to grow without exhibiting any character of an interrupted circulation of the blood upon its surface, or ulceration of the parts compressed by the ligature. His appetite was good, sleep and powers of locomotion were nearly the same as before the accident. On October 25th, he again struck his forehead accidentally, by which a large portion of the tumor was broken and separated: it was in a corrupted state, and showed very little of the appearance of the usual structure of the brain; on the following day his strength was visibly decreasing; and on October 27th, after eating his breakfast as usual, he became stupid and insensible; his pupils were much dilated, but he had no rigors. He died in the course of the afternoon.

On measuring the dimensions of the tumor before the application of the ligature, its longer diameter was $6\frac{1}{2}$ inches, the shorter diameter was $5\frac{1}{2}$ inches, its elevation above the margin of the aperture in the os frontis was 2 inches.

On examining the diseased parts after death, the dura mater was found adhering to the edges of the aperture through which the tumor had protruded, and to a small portion of the fungus itself. The morbid mass was of a much firmer consistence about its circumference than at its centre. The tumor was evidently continuous with the anterior lobe of the right hemisphere of the brain. Both the lateral ventricles contained some ounces of a bloody fluid. An abscess was found in the anterior lobe of the right hemisphere, containing between two and

three ounces of pus. This cavity extended from the anterior part of the corpus striatum, to the base of the tumor; but it had no apparent communication with either of the ventricles. The other parts of the brain exhibited no morbid appearance. The opening into the frontal bone was nearly circular; its diameter, from the internal spine to the temporal angle, was 3 inches; from the superciliary ridge to the upper margin of the bone, was $2\frac{1}{2}$ inches, and the edges to which the dura mater adhered were smooth and even. On dividing the diseased mass, it exhibited no distinct organization, but was a pulpy substance, of a grey colour, connected by shreds of the pia mater.

On the Cause of the Disease termed Trismus Nascentium. By A. Colles, M. D. one of the Professors of Anatomy and Surgery to the Royal College of Surgeons in Ireland, one of the Surgeons to Dr. Steevens' Hospital, &c. &c.

[From the Dublin Hospital Reports and Communications, Vol. I. 1818.]

Among the various conjectures which have been offered, to explain the cause of Trismus Nascentium, we occasionally find it ascribed to injuries of the umbilical chord; to irritability of the general system, combined with an inflamed or ulcerated state of the chord and navel. But I am not aware that any satisfactory proofs have been adduced in support of this opinion, however plausible.

The following considerations induced me to seek, by dissection, for the cause of this disease in the umbilical chord and fossa. First, the symptoms of the disease in infants closely resembles those of the trismus traumaticus of adults. Next we observe the occurrence of trismus nascentium to be confined to the periods of the separation of the chord, and the healing of the surface from which it is detached; as we observe the trismus traumaticus of adults to occur generally in the sloughing stage of the wound; sometimes when the wound has advanced much further to cicatrization; and very rarely, if ever, do we find either disease coming on after the ulcerated parts are perfectly healed. Another striking correspondence between these diseases is, that in general the most severe and rapidly fatal cases of each take place before the fifth day from the date of the wound or the birth of the child; and that those cases which occur when the surfaces have made considerable advancement towards healing, are very mild in their symptoms, and very slow in their progress.

Urged by these considerations, five years ago I first made a careful dissection of the umbilicus of a child which had died of locked jaw, and I have every year since dissected from three to six subjects, who had fallen victims to this disease. Twelve months ago I communicated to Mr. C. Johnston, one of the assistants of

the Lying-in-Hospital here, the result of these investigations, since which period I have dissected three cases in conjunction with him; and, at the same time, we compared the appearances with the corresponding parts in infants which had died of other diseases. The following brief description comprizes an account of those appearances, which were very much alike in all cases; differing only in degree.

The skin forming the edges of the umbilical fossa was, in some, a little more raised than usual. When the borders of this hollow were expanded by introducing a pair of dissecting forceps, we observed the floor of this cavity not flat, but considerably raised in the centre by a knob or large papilla; both the central raised part, and the surrounding flat parts of this surface, presented all the characters of those new membranes which are formed by suppurative inflammation. In some few instances the fundus of this cavity presented evident marks of superficial ulceration, confined to the vicinity of the umbilical vein. A probe readily passed through the substance of this central tubercle, and entered into the umbilical vein: such were the appearances presented by the umbilical fossa externally.

On cutting into the abdomen, the peritoneum covering the umbilical vein was highly vascular, as if from inflammation; this extended sometimes up to the fissure of the liver; often, however, not for a greater length than one inch above the umbilicus. The peritoneum, in the course of the umbilical arteries, appeared still more inflamed, an appearance which extended often as far as the sides of the bladder. Besides the appearance of the peritoneum along their posterior surface, the cellular substance which covered them, and the urachus anteriorly, was loaded with a yellow watery fluid, even down to the bladder. Leaving the umbilicus untouched, if we cut open the umbilical vein, from the liver to the vicinity of the umbilicus, we found only a few small coagula of blood within its canal; the inner surface of the vein was pale, and free from any marks of inflammation, yet the coats of the vein altogether were very much thickened. The umbilical arteries exhibited evident marks of inflammation. 1st, On slitting them up, a thick yellow fluid, resembling coagulable lymph, was found

within their coats. 2dly, In all instances their coats were much thickened and hardened, even as far as the fundus of the bladder.

On cutting into the umbilicus itself from its posterior or peritoneal surface, we found in the centre a space, about half an inch long, occupied by a soft yellow substance, which bore a very strong resemblance to coagulable lymph, produced by inflammation; it was this which formed the prominence observed in the external view of the fossa. The extent of this middle space varied in different cases, but in every instance the arteries opened into it, or rather were lost upon it.

In a few instances the umbilical arteries presented this appearance, or rather were converted into this substance, to the distance of a quarter of an inch from the navel. The extremity of the umbilical vein was affected in different degrees in various instances. In some it presented a pouch or varix, which extended one-eighth of an inch below the extremity of the opening of the vein, viz. in a direction towards the bladder. In some, the extremity of the vein presented an appearance of ulceration on its margins; and in all, the edges of the extremity of the veins were thickened. In every instance the ends of all these vessels remained open; their canals were in continuity with the soft substance which occupied the centre of the umbilical space, so that a small probe or bristle passed without opposition from these vessels into this soft substance.

In no instance was any mark of inflammation discovered in the right auricle or other cavities of the heart.

The state of the umbilicus and its vessels, here described, having been found in all the cases I have inspected, and these appearances not being discoverable in infants of the same age which had died of other diseases; is it not a fair inference that such is the cause of Trismus Nascentium? This opinion will appear well founded, when we recollect that the trismus traumaticus of adults is also generally connected with the sloughing or detaching process of wounds. These two forms of trismus still further correspond; for we find that in each of them, instances are to be met with, in which the disease is very violent and very

rapid in its progress to a fatal termination; and these are cases where the symptoms set in very early after the infliction of a wound, or very quickly after the birth of the child. With the nurses of our Lying-in-Hospital, these cases of infants are denominated black fits. The more ordinary form of trismus nascentium resembles the usual form of trismus in adults, and is by the nurses termed white fits. It is worthy of remark, that the infants which generally fell a sacrifice to this disease were strong and large ; their bodies appeared plump and well nourished; nor could any other mark of disease be discovered in the thoracic or abdominal viscera.

While I attempt to establish a morbid inflammation and ulceration of the umbilicus as the immediate cause of this disease, I by no means would object to the opinion, that it is connected with a state of the atmosphere more or less vitiated. For whoever will refer to an essay on this subject by Dr. Joseph Clark, inserted in the third volume of the Transactions Royal Irish Academy, must be convinced that such a cause does contribute to its production. I think, however, that it operates only as a remote cause, by inducing an unhealthy or unkindly form of inflammation and ulceration; and hence it is that this disease is so much more frequently met with in the children born in Lying-in-Hospitals, than in those born in private houses.

Does this discovery of the exciting cause of trismus nascentium lead us to any mode of prevention or of cure? In addition to ventilation or purifying the air, the only method of relief which has yet been tried, is that of dressing the umbilicus with spiritus terebinthinæ after the child is seized with the spasms. This, however, has proved absolutely ineffectual; nor will the failure surprise any one who considers that no benefit is derived in trismus traumaticus, from any particular mode of treating the wound, after the disease is established. I have lately learned, however, from a lady who lived in Jamaica for many years, and had a number of negroes on her estate, that this disease, which had formerly carried off a very great proportion of the infants of negroes, is now scarcely to be met with; and that the means of prevention which they adopted, were to plunge the infant

into a cold bath daily, for the first nine days, and daily to dress the umbilical chord with spirits of turpentine. This account has been further confirmed by the report of a medical practitioner from that island, who, while viewing the Lying-in-Hospital, made precisely a similar communication to Mr. C. Johnston.

I beg leave to submit the following queries to the consideration of those engaged in the practice of midwifery: Will any advantage attend the dressing the umbilicus with spiritus terebinthinæ, from the birth of the infant? Ought not this mode of dressing to be universally adopted? Can the umbilical chord be tied close to the abdomen, at a part which is covered with skin? Would tying it in this place produce a more active and healthy inflammation, by which the formidable disease of trismus might be prevented in infants; and by which a more firm cicatrix could be established, and thus the number of instances of umbilical hernia in adults would be diminished?

On the Medical Virtues of Chlorine.

[From the Journal of Science and the Arts, edited by the Royal Institution of Great Britain.]

Professor Valletta, chief surgeon at the great hospital at Milan, and an eminent practitioner, in a paper inserted in the Number of the Biblioteca Italiana for January 1817, denied in an open manner, that chlorine had been of any advantage in cases of hydrophobia, as stated by Professor Brugnatelli. The latter, however, perfectly confident of the truth of what he had asserted, vindicates his opinion, and gives an historical and detailed account of several authentic facts in which the anti-hydrophobic virtue of clorine had been recently realized and verified.

Richerche ed Osservazioni, &c.: or, *Observations and Experiments on the Volatility of Substances hitherto considered as fixed bodies.* By Dr. Hermbstaed.

It is perfectly true, as the author of the present Memoir observes, that we have as yet no correct or exact idea of the distinction between a fixed and a volatile body. Generally speaking, we might consider all bodies volatile; as it is most probable that could we produce a sufficient degree of heat, no substance could resist it. It follows, therefore, that we have no just idea of what a *fixed body* is; and we consequently feel great obligations to Professor Hermbstaed, in having called the attention of chemists to this important point of physical research. The memoir, which was read before the Royal Academy of Berlin, contains a variety of experiments instituted with a view of throwing some light on the subject under consideration. The first series of experiments was directed to ascertain how far we are right in considering potash as a fixed body, and it results from them that far from being so, the potash is

volatilized not only at a high degree of temperature, as hitherto known; but also at the degree of boiling water. Lime, barytes, and strontian, submitted to several experiments, proved that they are volatilized at the common temperature. With regard to the volatility of mercury the Doctor relates a curious fact. At the royal manufactory of looking-glasses in Berlin, during a severe winter, the artificers who worked in a room which had originally served for the process of *silvering* the glasses, lighted a fire, and thus heated the room to between 86° and 96° Fahrenheit. In a few days the whole of them were affected by a strong salivation, to their great surprise; as there was no trace of mercury in or near the room. They consulted on the subject; and suspecting the real cause of the event, had the flooring of the room taken up, when about 40lbs. of the metal were found spread about in different parts where it had fallen at various times during the operation of silvering, which had been executed in that room before. Thus we see mercury volatilized at the temperature of 90°: but the author pushed his inquiry further, and succeeded in finding the minimum of the temperature at which mercury would be volatilized, and found it to be that of 80° Fahrenheit.

On the Efficacy of the Supertrate of Potash in the Cure of the Teigne muqueuse (scald head.)

THIS is purely medical, and cannot interest any but medical persons. We may, however, observe that the author, a physician in Piedmont, asserts having cured several cases of scald head in young infants, by administering the supertartrate of potash to the mother or wet-nurse, according to the following formula.

℞ Potas. tartrat acid ℥i. Decoct. rad. gramin. ℔i. Sacch ℥ij. Solv. cap. paulatim.

On the Cure of Aneurism. By Chev. Scarpa.

This eminent Surgeon and Anatomist undertook, in 1816, a series of experiments, to ascertain whether the ligature applied to arteries in cases of aneurisms might not safely be removed after a much shorter period of time than has hitherto been done, and thereby shorten the great length of time which has been employed in the cure of that disorder. The result of these experiments was so flattering, and so far in unison with the professor's conjectures, that he has since removed the ligature the third day of the operation, and thus enabled the surgeon to treat and heal the wound by the first intention. Success attended him equally in this part of his experiments, and the present memoir contains the details of a recent operation for popliteal aneurism, performed by Sig. Palletta, according to the method of Scarpa, in which the ligature was removed the 4th day, the wound healed by the first intention, and the patient perfectly cured of his aneurism the fourteenth day after the operation.

On the Virtues of James's Powder in the Apoplectic Diathesis. By J. Cheyne, M. D. &c.

[From the Dublin Hospital Reports and Communications, Vol. I. 1818.]

"In the year 1786, in the month of July, the Rev. ——— ——— was attacked with a fit of the apoplexy. The method taken by a neighbouring physician on that occasion was to place his feet in warm water, and to give him an aperient medicine; this gave him relief for the present. In the beginning of September following he had a similar attack, and a physician attended him who ordered his feet to be bathed in warm water, gave him an emetic, and afterwards an aperient medicine, which he conceived would enable him to undertake a long journey, which he had to perform; but in a few days after, on his journey, he was seized at Chester with a more formidable attack than any of the preceding ones. A physician who attended him thought it necessary first to bleed him in the arm. He then cupped him; then applied leeches to his temples, gave him aperient medicines, and lastly put an issue in the back of his neck. All these operations were performed in the course of twenty-four hours. As soon as he arrived in Ireland, in the latter end of October following, he had another slight attack, when he called in medical aid again, and he was ordered to put a blister on the crown of his head; this produced a most copious discharge, and aperient medicines were added; and this treatment was continued for five or six weeks, during which time slight fits returned every two or three days. The application of the blister was found necessary every ten days or fortnight at farthest It appeared, in Mr. ———'s case, that a strict attention to diet was of the first consequence; he lived chiefly on chicken and white meats, but whenever he ate fish or drank malt liquor, he never failed to have a slight attack of the apoplexy after it. Finding that these remedies did not conquer the disease, which became more and more frequent, he was induced, at the instance of a

friend who had heard a particular account of its efficacy,* to try the effect of James's powder. He began by taking a grain, and gradually increased the quantity, till after taking it for nearly six months, it amounted to nearly twenty grains. That quantity was taken for at least six months more, without one night's intermission, and by his own account, it passed off without any other effect than increasing insensible perspiration and urine. He then lessened the quantity gradually, until he ceased to take any except at remote intervals, when he felt any fulness of his head; but ever since he began to take James's powder he has not had a single fit."

E. S.

August 2, 1811.

In addition to the foregoing case, which was written at the request of my friend, Mr. Crampton, by a female relative of the patient, I have only to add, that he was a man of a sanguine temperament, with a short neck, and that he died in the year 1816, in his 90th or 91st year, in consequence, as I believe, of a disease of the urinary organs.

Since this case came into my possession, I have been led to make a good many clinical experiments, which have enabled me to verify the reports which I had heard of the efficacy of James's powder, in sometimes removing the apoplectic diathesis in persons advanced in life. It is moreover worthy of observation, that James's powder has been of remarkable utility in certain instances of determination of blood to the head, which occurred at an early period of life, and threatened to end by effusion. Lastly, in two cases of general plethora, in which, however, the head was more affected than any other part, James's powder was exhibited by me with perfect success. The following is one of these cases, and it is selected in preference, because James's powder appeared to remove the disease without the assistance of any other remedy.

The subject of the case was a lady about twenty-eight years of

* From a female relative who had been cured of the same disorder by means of James's powder, who is now living and in good health, though upwards of fourscore.

age, of a sanguine temperament, and rather full habit of body, without any tendency to hysterical complaints.

She had been complaining for nearly seven years of a distressing fullness in her head. During the first three years of her illness she had three children still-born; then she went to London to consult an eminent accoucheur, who made her live low and abstain from fermented liquors, and had her bled from the arm whenever her head was severely affected. In the two following years she had two children, born healthy and strong. She still pursued the same abstinent plan, and was let blood when the uneasiness in her head was great, but without the same benefit; for, about six weeks before she consulted me her last confinement took place, the child being again still-born.

She complained of a heat and weight in her head, so that she could hardly keep her eyes open. She had continued vertigo; her vision was indistinct, and her memory impaired; she described herself as confused and stupified. She had a sense of suffocation and fullness about her throat, so that she feared to go to sleep, and for many weeks she had no expectation of again awaking. But what distressed her more than any thing was, a peculiar sensation at her heart, which she said was as if there were no pulse in it for nearly a minute, as if it had not room to beat. Her skin was dry and hot, her pulse full and rather quick, and she complained of swelling in her hands and feet, which, however, did not pit upon pressure.

She began a course of James's powder in the latter end of September: the first night she took only two grains, and every succeeding night she took an additional half grain, till the dose amounted to twenty grains. She took twenty grains every night for five weeks, when she found herself so well that she discontinued the medicine.

The last letter I received from her was dated on the 31st of January, 1817. She was at that time "free from all the fulness about her throat, and the swellings of her hands and feet were removed, but the relief in her head was inexpressible; she had nothing of the unpleasant sensation at her heart, except when any thing particularly agitated her. She still found it necessary to at-

tend to her manner of living, as when she ate more than a small bit of meat it made her heavy. Having a particular dislike to wine, she never drank any thing at her meals but water." She was recovering from catarrh, which she attributed to walking in the snow.

It is further to be observed, that she walked out every day all the winter without muffling herself more than usual, and without injury, until she exposed herself unnecessarily. The medicine had no perceptible effect; and in removing the dry and burning heat of the skin it did not sensibly produce perspiration.

In the month of July she was in perfect health.

The following very simple method of exhibiting James's powder, in cases of undue determination of blood to the head, is that which I have generally pursued. The patient is made to begin with a very moderate dose, not more than two grains at bed time, and to increase the dose by half a grain every night, until some sensible effect is produced upon the stomach, bowels, or skin. Should the stomach be affected with sickness, the dose must be lessened by one grain on the following night. By the addition of a little rhubarb to it, a larger quantity of James's powder may be administered than the stomach could otherwise bear. If the skin is softened, or the bowels affected, the dose should not further be increased, but it must be repeated every night for a considerable length of time: in several instances I have known eighteen or twenty grains taken for a considerable period without any inconvenience. Even when not productive of any sensible perspiration, it sometimes allays the heat and restlessness which so often attend irregular determinations of blood. In one or two instances it has apparently had a soporific effect. In one instance the patient, after a comfortable night, always awoke gently perspiring, his skin previously having been remarkably unyielding; but in other cases it has produced no sensible effect upon the secretion or excretions, save that of removing a sense of burning heat of the surface of the body.

It has not been productive of any injurious effects upon the appetite or digestion, and no rules of diet have been given, but such as the nature of the case required, unless that directions have been

given to avoid acids. In cold weather the patient has been desired to make some addition in point of clothing, but has not been confined to the house; on the contrary, when capable of it, has been encouraged to take regular exercise in the open air. Nor has it appeared to me that the habit was more susceptible of catarrhal or rheumatic complaints, while under the influence of James's powder, than at any other time.

I need scarcely observe, that antimonials are not meant to supersede the usual remedies, namely, bleeding, purgatives, and a strict antiphlogistic regimen. They are merely a part of the prophylactic treatment to be employed when the fit or threatening of apoplexy is over.

It would be easy to form a theory of this matter upon the well-known property which antimonials possess of determining to the surface, promoting the intestinal secretions, and controlling increased vascular actions; but this would be a waste of words at present.

I have made no experiments with any other preparations of antimony, as they are all less uniform in their operation, and consequently less manageable than James's powder; but I suppose they might be substituted in economic prescription.

James's powder is probably applicable to that species of epilepsy which is connected with the apoplectic diathesis, and perhaps to other species of epilepsy also.

It was not my intention to add any thing to the foregoing testimony in behalf of the utility of James's powder, in determinations to the head; but I cannot resist the temptation of annexing a case, which I owe to an accurate observer of disease, Dr. Brown, staff surgeon in this district, and which I received just as I was sending my manuscript to press.

"August 2d, 1817. The subject of the case is a gentleman, about 50 years of age, who had been accustomed all his life to live much in society, with a round chest and short neck, and rather inclining to corpulency. In the autumn of 1816, he had the first of the fits to which he has since been subject. The ap-

proach of the fit was usually indicated by a distended stomach, which he termed being bilious, by some degree of giddiness and throbbing at the temples; and it consisted of an instantaneous privation of sense and the power of motion, and a consequent falling flat on the floor or the street; but he usually had hardly reached the ground before he was quite himself again. The fit left no other effect than a confused sensation in his head.

These fits he usually had about once or twice in a fortnight; one day he had them twice.

Whatever affected his temper, or hurried him; the buzz of a crowded room, or several persons speaking together, he used to imagine had a tendency to produce these attacks.

The practice adopted for his relief consisted of bleeding, cupping, and leeching his temples; (the latter was the form most generally had recourse to.) From a dozen to a dozen and a half of leeches was the number usually applied; he was also purged, about twice a week, with five grains of calomel and ten of ext. coloc. c. at bed-time, and half an ounce of Epsom salts in the morning.

He was deprived of wine, beer, &c. and confined to one dish at dinner; and on this plan the frequency of fits was much diminished; still, however, there was one occurring now and then.

About the middle of last April, he commenced the James's powder at your suggestion; two grains was the quantity taken at bed-time at first, and the dose was increased a grain every night until he reached ten, which he took every night for a week; the dose was then increased to twelve, then to fourteen, then to sixteen grains: he is now taking eighteen every night at bed-time, from which he perceives no sensible effect. At first he used to perspire considerably more at night, and in the day more upon any slight exertion than was usual to him, and he made more water.

He has now not had any fit for nearly four months."

Mémoire tendant à demontrer de plus en plus la Force magnetisant du bord extréme du Rayon violet, &c. &c. By C. Ridolfi.

[From the Journal of Science and the Arts. No. VI. 1817.]

Our readers must recollect the asserted discovery of Professor Moricchini of Rome, respecting the magnetising power of the violet rays. Notwithstanding the many experiments made by the discoverer in the presence of eminent men who witnessed his success, the discovery has been disputed, controverted, and ridiculed in various parts of Europe, and even in Italy where it was first made. The present writer, a nobleman cultivating the science with success, was amongst those who raised a thousand objections against Moricchini's experiment; the result of which has been, that from more specific information on the subject, derived from repeated conversations with the discoverer himself, Marquis Ridolfi succeeded in magnetising two needles, the one in thirty, the other in forty-six minutes, and can now charge with the magnetic power, by the same process, as many needles as he pleases. The needles thus magnetised (namely, by directing on and passing over them for a period of not less than thirty minutes the violet rays of the spectrum, through the medium of a condensing lens) possess all the energy and the properties of needles magnetised in the common way by means of a loadstone. Their *homonomous* poles repel, while the *heteronomous* poles attract each other. Made to vibrate on a pivot, their point turns constantly to the north, their heads to the south.

Marquis Ridolfi next proceeded to discover the causes of failure occurring to the philosophers who attempted to repeat the experiment without success; and thinks he has fully ascertained them. At the same time he shows, that all the precautions said to be requisite in the performance of the experiment, by Moricchini himself, are needless. Thus he succeeded in magnetising a

needle, though operating in a room, the atmosphere of which had been previously charged with aqueous vapours. Marquis C. Ridolfi has sent a needle intensely magnetised by Moricchini's process, to a friend in London, who will be able to judge how far we are to believe in this asserted discovery of the Italian professor.

Account of an Epidemic Petechial Febricula. By Edw. Percival, M. B. Cantab. & Dub.—M. R. I. A. one of the Senior Physicians to the Hospitals of the House of Industry, &c. &c. &c.

[From the Dublin Hospital Reports and Communications—Vol. I, 1818.]

The appearance of *petechiæ* in febrile diseases, either of the exanthematous or typhous kind, has usually been deemed a symptom of danger, even by those who have rejected the popular doctrines of putrescence or malignity. Its common occurrence, in the worst description of epidemic fevers, gives countenance to this apprehension. Yet experience has convinced me, both in hospital and private practice, that it is too generally exaggerated, and that a distinction, which I believe has not hitherto been noticed, respecting the appearance of petechiæ, may afford some guidance in determining the ordinary prognosis of that febrile symptom. When minute purple stigmata, or the florid marbled efflorescence (without elevation of the cuticle) appear in young subjects, before the fourth or fifth day of fever, they are almost uniformly banished in two or three days by cool air, cold ablution, and purgative discipline; and, so far as I have observed, they import no peculiar danger or complexity of disease. On the other hand, when these eruptions appear, for the first time, at a mature stage, or about the crisis of fever, after due evacuants have been employed, and while the temperature of the body but little exceeds the healthy standard, such petechial symptoms indicate

danger. In general it happens, that petechiæ make their appearance much sooner in children than in adults; they are likewise more quickly banished from the former than from the latter; and amongst several hundred children, whom I have attended in petechial fever, I do not recollect a single instance of vibices, of the large purple blotch, or of superficial gangrene.

In the month of December, 1814, an epidemic febricula prevailed in the neighbourhood of Delgany, in the county of Wicklow. It commenced at a female school, which is situated on a healthy spot, at the side of a hill. The utmost attention has always been paid to the cleanliness and ventilation of the house, to the clothing, diet, and general habits of the children. I can affirm, from my own knowledge, that no petechial fever, or other serious epidemic, had occurred amongst them during five years preceding; and their intercourse with the neighbourhood was at all times extremely limited.

The first symptoms of the epidemic to which I refer, were so extremely slight as to attract little attention. Two of the children were observed suddenly to lose their appetites, to be chilly in the evening, and rather more thirsty than usual. Yet they had no distinct rigors, nor sickness of the stomach, nor pains of the head or limbs. Other children became affected in a similar manner; and in the course of eight or ten days the whole school was implicated in the disorder. Most of the patients complained of lassitude, yet three only confined themselves to bed for two or three days. The rest, sixteen in number, followed their usual avocations; so that no alarm was excited, until it was discovered, by accident, in one instance, and afterwards by examination of the rest, that each had a copious eruption of minute dark coloured petechiæ, both on the trunk and limbs.

Two of the patients, one a child only five years old, the other an adult female domestic, were sent to me, in Dublin, as specimens of the disease. The woman was then in the fourth day of her febricula. The chilliness, of which she had at first complained, had entirely subsided. Her tongue was thinly coated with mucus, her eyes were somewhat dull and watery, her pulse about 86, and perfectly tranquil. She had no giddiness of the head,

pain, or cough; and complained only of languor, thirst, and impaired appetite. She had numerous small petechiæ, perfectly distinct, of a dun colour, which she informed me appeared on the second day of her indisposition. The stigmata which I saw were scattered on the neck, shoulders, and fore arm; and she told me there were similar spots on her loins and lower limbs. The child had contracted the same disorder about the same time. The petechiæ on her trunk and limbs were numerous, but more faded in their hue than in the other case. She was lively, and occupied in her sports nearly as usual. Yet her countenance obviously betrayed indisposition, her appetite was impaired, and her bowels costive.

In each case, I directed only gentle purgatives, to be repeated when occasion required; and the children who remained at the school were treated in a similar manner. Had I been on the spot to watch the first access of the febrile symptoms, I should undoubtedly have tried the efficacy of emetics or cold affusion, in cutting short the disease *in limine*. But the first stage being passed, no further occasion appeared for active interference.

The duration of the febricula did not, I believe, exceed nine days in any instance, and the petechial eruption lasted about five days. No sequel of cutaneous or intestinal ailment followed. Some scattered cases of the disorder occurred in the neighbourhood of the school and the village of Delgany; but not a single case (so far as I have been able to learn) degenerated into typhus fever.

I am quite unable to conjecture the origin, or assign any probable cause of this remarkable febricula.* It may be worthy of notice, that in the preceding winter (1813) a very slight morbillous epidemic appeared in Dublin, attended with the characteristic

* Some petechial epidemics of a similar kind are cited by Burserius, in the tenth chapter of his Institutes; and anomalous cases have been recorded by British writers.

The slightness of this petechial fever is very remarkably contrasted with the "singular and fatal disease occurring in the persons of the same hamlet," described by Mr. Gervis, in the xxth article of the 2d vol. of the "Medico Chirurgical Transactions." It may rather be compared with the Exanthematous Febricula, described by Dr. Maton in the fifth vol. of the "Transactions of the College of Physicians." Art. xi.

eruptions, but paler and more scanty than usual, with little fever or coryza. Its progress through two female schools fell within my own observation; and of the patients whom I attended, *four* experienced a second attack of the disorder, in a much severer form, within the space of three months. I at first doubted the accuracy of my previous observation; but facts of a similar kind occurring to other practitioners in the city, at the same time, I was confirmed in the opinion that my patients had twice undergone the measles in the course of one winter.*

But the petechial appearances in the fever before described, bore no resemblance to the morbillous eruption. Neither roughness nor elevation of the cuticle were observed, nor even the marbled efflorescence, which often occurs in typhoid fevers. The spots were in fact precisely such stigmata as appear in the fevers commonly termed putrid or malignant, without any collateral symptom of inflammation, putrescence, or malignity.

How far these facts will serve to throw light on the proximate cause of petechiæ, I do not venture to determine. The disease termed "hæmorrhœa petechialis" ought to furnish further illustration of the same subject. The common theory of inflammation appears to me as little calculated to explain these diversified phenomena, as the obscure doctrine of putridity. Were I to indulge any conjectures on the subject, they would be founded on the disturbed balance of the venous and arterious systems—laxity of the subcutaneous capillary veins, and defective absorbent power of the capillary arteries.

* This fact, of the recurrence of measles, as of other exanthematous fevers, which are usually sustained but once in the life of an individual, is not without examples on record. Dr. Baillie has related several cases of this kind in the xixth and xxth articles of the third volume of "Transactions of a Society for promoting the Improvement of Medical and Chirurgical Knowledge." It is remarkable, that, in the examples there recorded, as in the instances to which I have alluded, the *second* attack of measles followed the *first*, in a few months. Dr. Baillie's cases were attended with more fever and eruption than those which I witnessed in Dublin; yet the febrile characteristics were sufficiently marked in the latter instances, to render them analogous to the former, rather than to the morbillous affection of the skin, mentioned by Dr. Willan, in his Reports on the Diseases of London, p. 207, and in his Work "On Cutaneous Diseases," p. 235.

A Case of Ruptured Intestine. By Charles H. Todd, Member of the Royal College of Surgeons, &c.

[From the Dublin Hospital Reports and Communications, Vol. I. 1818.]

On the twelfth of January last, at four o'clock in the afternoon, a strong robust boy, aged two years, was brought to the Richmond Surgical Hospital. He appeared in excruciating torture, had incessant retching, discharging from the stomach small quantities of mucus only; his belly was much swelled, and the slightest pressure upon it produced severe pain. His mother stated, that she had been obliged to go out on business at one o'clock, and had left the child in perfect health, in the care of an elder sister; that on her return home at two o'clock, she found him in the state he then was, and that she was informed by her daughter, that the boy had fallen from a chair, and was instantly seized with violent pain of the belly and vomiting, but threw up very little, although he had been largely fed by his mother before she went out.

The symptoms with which the boy was affected appeared to the apothecary of the hospital to resemble such as usually arise from a metallic poison; and under this impression he immediately administered an active emetic, which aggravated the child's sufferings by increasing the retching. A large dose of calomel was next given him; clysters, blood-letting, the warm bath, and fomentations, were employed without any benefit, and the boy died in the course of the evening.

On the following morning I examined the body. The abdomen was enormously swelled, tense and tympanitic; on puncturing the peritoneum a great quantity of gas escaped; and more than a quart of fluid, which seemed to consist chiefly of broth, was contained in the cavity of the abdomen. The peritoneum exhibited the usual appearances of active inflammation; the minute vessels of that portion of it which lines the parietes of the abdomen were remarkably turgid. The stomach and small intestines were quite empty and contracted; the colon was unequally inflated, and some solid feculent matter was felt in the cœcum.

On examining the small intestine, at the part where it escapes from behind the great mesenteric vessels, the upper extremity of the jejunum was found completely torn off from the duodenum, the ends of the ruptured intestine were separated from each other for nearly an inch, and the mucous membrane everted some space on both parts. A small quantity of blood was extravasated between the layers of the mesentery, and also between the peritoneal and muscular coats of the transverse portion of the colon; the mucous membrane of the alimentary canal was uniformly healthy, and the glandular viscera were perfectly sound.

As this appears to me to have been an uncommon instance of ruptured intestine, the recital of the case may not be uninteresting to the pathologist, although perhaps not very instructive in a practical point of view. At first I was inclined to believe that the laceration of the intestine was secondary, and was probably occasioned by the violent exertions made in vomiting. However, on consideration, I think it more likely that it was the immediate consequence of the fall. At the time the accident occurred, the boy's stomach, and probably the duodenum, were distended with food; and as the lower extremity of the duodenum experiences, from the relation it bears to the aorta and great mesenteric vessels, a degree of constriction sufficient to retard the passage of its contents into the jejunum, I can very well conceive, that if one intestine were full and the other empty, a blow on the epigastric region, or any other sudden violence exerted on the parts so situated, might have the effect of tearing those intestines asunder.

Three Cases of Calculi removed from the Urethra, without the use of Cutting Instruments. By Astley Cooper, esq. F. R. S. Surgeon to Guy's Hospital.

[From the Medico-Chirurgical Transactions, 1817.]

In the first volume of the Medico-Chirurgical Transactions, a very interesting paper is given by Mr. Thomas, on the *Dilatation of the Meatus Urinarius.* When I perused that paper, I resolved to take the first opportunity which might occur of employing the same priniciple in the extraction of a stone from the bladder; and having made the successful issue of a case known by relating it in my lectures, two of my friends, Mr. Wright of Nottingham, and Mr. John Okes of Cambridge, employed the same means, and with similar advantage.

CASE I.

Phillis Keen, who had not been able to retain her urine from her last delivery, which was in the summer of 1809, was admitted into Guy's Hospital on May 30, 1810, with symptoms of stone. At twelve o'clock on Thursday, the 21st of June, a piece of sponge was passed into the meatus urinarius, which, on the following day at one o'clock, was withdrawn, and a pair of middle-sized stone forceps were passed into the bladder, and a stone more than one inch long, and three-fourths of an inch wide, was extracted. On the 27th of June she was discharged cured, being free from every symptom of the stone; but the incontinence of urine, when she quitted the hospital, continued as before the operation.

CASE II.

Mr. John Wright, of Nottingham, having heard of the preceding case, performed the operation, and sent me the following letter:

"Dear Sir,

"I am in hopes that the following case of extraction of a stone from the female, will be acceptable to you, and beg your acceptance of the calculus. I am, dear sir, yours, &c.

"JOHN WRIGHT."

Elizabeth Nutt, a small weakly child, six years of age, had laboured under symptoms of the stone for four years, when she was admitted into the Nottingham General Hospital, on the 28th of April, 1812. The urethra was distended by means of spnoge tent, until the 5th of May, when a large stone, weighing an ounce and a half (avoirdupois) was extracted with a pair of polypus forceps, and the girl left the house free from complaint on the 9th, only four days after the extraction.

Nottingham, May 12, 1812.

I received the following letter from my friend and pupil, Mr. Okes:—

"Dear sir,

"Allow me to submit to you the particulars of the extraction of a calculus vesicæ urinariæ after artificial dilatation of the urethra.

I am, dear sir, with all respect, your very obliged and sincere friend,

"JOHN OKES."

CASE III.

Case of extraction of a calculus vesicæ urinariæ, after dilatation by sponge tent, by Mr. John Okes, Member of the Royal College of Surgeons in London, and Surgeon in Cambridge.

The case here recorded is not offered to your notice on account of its novelty, but as a further confirmation of the dilatability and

contractibility of the female urethra. The os uteri, vagina and rectum, are capable of dilatation to a most prodigious extent; and Mr. Thomas, in a case in the first volume of the Medico-Chirurgical Transactions, has demonstrated, that not only may the female urethra be very extensively dilated, but that it will, after such extension, recover its tone, and the patient be left free from incontinence of urine, a circumstance almost invariably the result of an incision through the sphincter vesicæ urinariæ.

In June, 1815, a girl, about eleven years of age, having a calculus in the urinary bladder, consulted me, and expressed herself willing to submit to any operation which held out a prospect of relief from her dreadful sufferings. It was determined to dilate the urethra by sponge tents, and as she was in good health, no other preparation was necessary than to empty the bowels by a cathartic medicine, previously to the attempt at dilatation. In the evening after this had been administered, a piece of prepared sponge, with a string affixed to it, as large as could be introduced, was passed into the urethra, and directly afterwards she took forty minims of tinctura opii; she passed a tolerably quiet night, the urine draining away through the sponge. On the following morning, the sponge which was excessively swelled was removed, a larger piece introduced in the same manner as before, and the same dose of tinctura opii was directed. This second tent produced more pain than the first did, but not enough to discourage a perseverance in the plan; the sponge was therefore repeated morning and evening for three successive days, increasing the size of it as much as could be borne, and giving at intervals as much tinctura opii as was necessary to keep down the pain. On the afternoon of the third day, the urethra appeared to be sufficiently dilated to justify the attempt of extracting the calculus, and a pair of forceps were easily passed into the bladder, and the calculus extracted without much difficulty. The difficulty in the extraction of the stone was increased by the forceps having seized it from point to point at its major axis; the parts, however, received no material injury, as only a few drops of blood followed the operation. The child slept comfortably during the night, and only very slight feverish symptoms came on the next day. The treatment common upon such occa-

sions was adopted; the urine flowed involuntarily for three days, at the end of which period the incontinence ceased, and she has ever since retained her urine perfectly well. The calculus, of which I send you an etching of its natural size, weighed four drachms, and is in circumference at its major axis three inches and three-eighths, and at its minor three inches and one-eighth, and as the forceps unfortunately seized the stone at its major axis, it may fairly be allowed, that if the thickness of the blades of the forceps be included, the urethra was distended to a circle of three inches and three-fourths in circumference. The result of the operation being favourable, even under the disadvantageous circumstance of the stone being seized at its major axis, is an additional argument for the use of distension, and it is proper also to observe, that much advantage was obtained by the use of sponge for dilating the urethra, as it at the same time allowed the urine to drain off, and by that means prevented the irritation which must have taken place if any other tent had been used, which might have prevented the flow of urine from the bladder.

Remarks.

In the adult it will only be necessary to introduce a piece of sponge for twenty-four hours, and a stone of large size may be extracted without any great irritation being excited by it; but in the child the dilatation should be more gradual, as they suffer more from it on account of their greater irritability. The retention of their urine whilst the sponge is in the urethra also occasions considerable irritation, and it will be proper to have a groove made in the side of the sponge, to allow of the gradual escape of the urine, or, as my friend Mr. C. Hutchinson suggested, a catheter might be placed in the centre of the sponge.

A great advantage will result from this mode of operation, if it should be found that in the majority of cases the urine is retained after the extraction of the stone, as the great objection to the use of the gorget or knife in the operation in the female, is the loss of power of retention which follows it, leaving the patient offensive to herself and friends, and the subject of continued excoriation.

It is true, Mr. Hey has suggested the introduction of a sponge into the vagina, in the hope, that by the constant application of the surfaces of the wound to each other, they might be made to unite, and when cutting instruments are employed, such a trial will be proper.

Another advantage will be derived from this plan, *viz.* that it may be employed as soon as a small stone is discovered in the bladder, when it can be extracted with great ease, and at a time that a more dangerous, important, and painful operation would be hardly proposed.

MISCELLANEOUS FACTS.

Dr. Benjamin Heyne, has made some curious observations on the *Cotyledon Calycina*, (Bryophellum Calycinum) a native vegetable of India. This plant, he says, possesses the peculiarity of a sour taste in the morning, insipid at noon, and bitter in the evening. Does this plant absorb oxygen during the night, and part with it again in day time?—*Transactions of the Linnean Society of London*, vol. ii. 1816.

In Hufeland's *Journal der practische Heilkunde, for June, published at Berlin*, 1816, there is an interesting paper on Psora or Itch, by Dr. Harles. The remedy which he found the most efficacious, after employing a great variety of means, is the sulp. zinci in solution, externally applied. His mode of using this remedy is this: he directs the patient to take crem. tart. and sulp. when the case is severe, and to use the following as a wash:

℞ Zinci sulph. ʒij.
Aqua distil. commun. ℥.

This application he always found to cure the itch in a very short time. The white vitriol has long been used externally in this disagreeable cutaneous affection. D. Jasser used it in the form of an ointment. The following is his formula:

℞ Vitriol alb., flor. sulp., pulv. bacc. laur. āā.
Ol. rini, lini olivor, q. s. m. ad consestent. unguent. fluid.

Vide Smucker's Chirurgesche Shriften, vol. iii. page 194.

There is a case mentioned in the *Medico-Chirurgical Journal*, (of Salsbury, Germany,) edited by Dr. I. N. Ehrhart, page 232,

of a woman, who after a very copious loss of blood, *saw every object quadruple, or four-fold.* She was relieved by tonic medicines.

State of the Weather.

1818. Feb. 9, 7 A. M. 5° }
10, do. 4° } Above Zero.
11, do. 10° }

The above were the coldest days this season. Last February the coldest weather was as follows:

1817. Feb. 13, 7 A. M. $6\frac{1}{2}$° } Above Zero.
14, do. 5° }
15, do. 2° below Zero, (coldest day).

The above is taken from a thermometer fixed in the same place last year, and constantly exposed night and day, of course a fair criterion to judge by; consequently, it is presumed, that the ice is not so firm in our river now as it was the preceding season, there being a difference of 6° between the coldest day last year and the coldest day this year, up to this day. The river fastened last year the 19th January; this year the 31st. It opened the 9th March last. We had much more snow, so far, last season than this. It is found, this year, that the hydrants thaw much easier with warm water than last: as then, their pipes, as well as those of a great many fire plugs, were found, in the spring, froze, though 3 feet below the surface of the ground.

February.

Statement of Deaths, with the Diseases and Ages, in the City and Liberties of Philadelphia, from the first of January, 1817, *to the first of January,* 1818.

Deaths in each month.	Adults.	Children.	Totals.	AGES.	
January,	98	59	157	Under 1 year	548
February,	89	81	170	From 1 to 2	138
March,	106	79	185	2 to 5	34
April,	131	76	207	5 to 10	73
May,	140	73	213	10 to 20	96
June,	119	76	195	20 to 30	256
July,	86	103	189	30 to 40	325
August,	107	123	230	40 to 50	222
September,	125	108	233	50 to 60	162
October,	86	60	146	60 to 70	106
November,	94	48	142	70 to 80	84
December,	112	38	153	80 to 90	61
				90 to 100	11
				100 to 110	1
Totals,	1293	924	2217	Total,	2217

The above-mentioned Deaths were caused by the following Diseases and Casualties, viz.

Aphthæ	5	*Brought over,*	80
Asthma	8	Angina Pectoris	2
Abscess	11	Burns	10
Aneurism	1	Cancer	17
Apoplexy	25	Casualties	24
Atrophy	30	Catarrh	30
Carried over,	80	*Carried over,*	163

Brought over,	163
Childbed	5
Cholera Morbus	137
Cholic	12
Consumption of the lungs	349
Convulsions	167
Concussion of the brain	3
Cachexy	2
Contusions	2
Decay	29
Diarrhœa	59
Dropsy	64
of the breast	20
in the brain	65
Drowned	31
Dysentery	33
Drunkenness	17
Drinking cold water	2
Debility	81
Diabetes	1
Epilepsy	3
Erysipelas	7
Eruptions	7
Fracture	2
Fever	47
Intermittent	6
Remittent	21
Bilious	16
Nervous	6
Malignant	4
Puerperal	14
Typhus	95
Hectic	5
Inflammatory	2
Gangrene and Mortification	14
Gout	6
Hooping Cough	21
Carried over	844

Brought over,	844
Hives	21
Hernia	1
Hemorrhage	12
Hydrophobia	1
Inflammation of the brain	21
Lungs	8
Stomach	31
Bowels	29
Liver	26
Bladder	2
Insanity	24
Jaundice	4
Lethargy	2
Locked-Jaw	9
Old Age	50
Pleurisy	88
Palsy	32
Rheumatism	9
Scrofula	16
Sore throat	10
Still-born	110
Suicide	2
Sudden	33
Syphilis	6
Stone	2
Suffocation	1
Scirrhus	2
Small Pox, natural	52
Spina Bifida	1
Teething	26
Tabes	1
Ulcers	1
Worms	14
Unknown	52
Total,	2217

Of the above there were—Males of twenty years and upwards	748
Ditto under twenty years	438
Females of twenty years and upwards	545
Ditto under twenty years	379
Children, principally under one year, whose sex is unknown	107
Total,	2217

*** The city and liberties of Philadelphia are supposed to contain about one hundred and twenty thousand inhabitants.

METEOROLOGICAL.

From the returns of the registers of the land offices, and others, I have deduced the following, which may be interesting:

Mean Temperatures, by Fahrenheit, for Dec. 1818.

At Detroit,	26	above Zero.
Wooster,	29	do.
Zanesville,	35	do.
Cincinnati,	36	do.
Milledgeville,	49	do.
Augusta,	54	do.

Lowest Temperature.

At Detroit, Dec. 21,	10	below	Zero.
Wooster, do.	8		do.
Zanesville, do.	4		do.
Cincinnati, do.	6	above	do.
Milledgeville, do.	22		do.
Augusta, do.	24		do.

The distance between Detroit and Augusta is about six hundred and fifty miles, or about 9 degrees 21 minutes of latitude. It is

worth observing that the same day, (the 21st) was the coldest through the whole of that space.

JOSIAH MEIGS.

Washington City, Feb. 27, 1818.

At Auburn, N. Y. on the 11th instant, Mrs. Penick, aged thirty-one years, (wife of Mr. Wait Penick) after a lingering illness of two years, from a scirrhous enlargement of almost the whole substance of the liver; after death she was opened by Dr. Pitney, assisted by Drs. Wm. C. Bennet, Cooly, and Lawrence, and about six quarts of water taken from the cavity of the abdomen. The liver was then taken out and weighed; its weight was thirty-four pounds four ounces; all the other viscera sound. The ordinary weight of a healthy liver, in an adult, is from three to four pounds.

UNIVERSITY OF PENNSYLVANIA.

At a public Commencement held on the 10th day of April, 1818, the Degree of Doctor in Medicine was conferred on the following gentlemen, who submitted the Theses annexed to their respective names.

Massachusetts.

T. Edwards Holbrook,	On Cystirrhœa.

New York.

William F. Seaman,	On Heat.

New Jersey.

John Y. Clark,	Colchicum Autumnale.
George H. Burgin,	Modus Operandi of Medicines.
Lorenzo T. Fisler,	Dysentery.

Pennsylvania.

Richard Harlan,	On the Vital Principle.
Hugh L. Hodge,	Digestion.
George B. Wood,	Dyspepsia.
Benjamin H. Coates,	Blisters.
J. Rhea Barton,	Certain Injuries of the Bones of Children.
David Francis Condie,	Digestive Process.
John R. Peckworth,	Cantharides as a remedy in Amenorrhœa.
John M'Culley,	Insanity and Hydrocephalus.
Jacob Dewees,	Effects of Labour and Exercise.
Ezra Michener,	Secale Cornutum.
David Hutchinson,	Phthisis Pulmonalis.
James S. Rich,	Perspiration.
John Carothers,	Calomel in the Diseases of Children.
David M. Kirkpatrick,	Amenorrhœa.
Hugh Campbell,	Erysipelas.
Thomas Vanvalzah,	Dysentery.
Thomas B. Cobean,	Hepatitis.
Ferdinand Strein,	Cholera Infantum.
Ellis Lewis,	Hepatitis.
David Gallagher,	Chorea Sancti Viti.
James P. Scott,	Amenorrhœa.

Delaware.

John Johnson, . . . Modus Operandi of Medicines.
Thomas J. Boyd, . . . Chorea Sancti Viti.

Maryland.

David Craufurd, . . Gastric Rheumatism.
Richard Randall, . . . Diurnal Revolutions of the Pulse.
James Dixon, . . . Rheumatism.

Virginia.

Yelverton Bolling, . . Phthisis Pulmonalis.
Nathaniel M. Miller, . Diurnal Revolution of the Pulse.
Pitman C. Spencer, . . Nitric and Nitro-Muriatic Acids.
Ryland Randolph, . . Connection of the Stomach, &c.
James Cornick, . . Vaccination.
Patrick H. Foster, . . Dysentery.
Thomas Marlow, . . Rheumatism.
Benjamin A. Jones, . Mammary Abscess.
William J. Holcombe, . . Excretion and Retention.
William P. Moseley, . Medical Properties of Charcoal.
David Hobbs, . . . Winter Epidemic.
Hector Harris, . . Rubus Procumbens.
Joseph B. Anderson, . . Winter Epidemic of Virginia.
Edward T. Broadnax, . Modus Operandi of Cathartics.
James T. Royall, . . Euphorbia Ipecacuanha.
Theophilus F. Gilliam, . Hydrocephalus Internus.
Walter R. Johnston, . . Ascites.
John Woods, . . Dropsy.
William D. Coles, . . Conversion of Diseases.
John Blair Morton, . . Peripneumonia Typhoides.
James Horace Lacy, . . Dysentery.
Anthony W. Smith, . Dyspepsia.
Nathaniel M. Osborne, . Menorrhagia.
Edwin Pegram, . . Epilepsy.
John H. Mason, . . Secale Cornutum.
James Brown Wallace, . Sub. Nitrate of Bismuth.
Samuel Webb, . . . Intermittent Fever.
William H. Wharton, . Vis Medicatrix Naturæ.
Fendall Gregory, . . Jaundice.
John M. Patton, . . Animal Life.
Charles Beale, . . . Dysentery.
William T. Minor, . Rheumatism.
John Duval, . . . Fractures.

William P. Graham,	On the Structure and Functions of the Skin.
Thomas W. Jones,	Hepatitis.
Francis G. Taylor,	Pulse.
John F. W. Merritt,	Ophthalmia.
Samuel V. Watkins,	Cynanche Trachealis.

North Carolina.

John T. Clanton,	Typhus Pneumonia.
Isaac Butler,	Hydrothorax.
Lewis M. Jiggitts,	Amenorrhea
John H. Atkinson,	Winter Epidemic, &c.

South Carolina.

Thomas Broughton,	Spiders Web.
Joseph M. Dill,	Dyspepsia.
Thomas Legare, jr.	Late yellow fever in Charleston.
James Ramsay,	Tetanus.
Alfred Brevard,	Winter Epidemic in South Carolina.
William B. Whitaker,	Scrofula.
John D. Magill,	Pertussis.

Georgia.

Thomas G. Janes,	Arthritis.
Richard M. Berrien,	Mania a potu.

Kentucky.

Benjamin Tompkins,	Influence of Spring, &c.
George Walker Call,	Menstruation.
Willaim A. M'Dowell,	Suspended Animation.

Louisiana.

Robert H. Sibley,	Dysentery.

Mississippi.

William Dunbar,	Hydrocele.

The Honorary Degree of M. D. was also conferred on Coleman Rogers, adjunct Professor of Anatomy in the University of Transylvania.

PHILADELPHIA MEDICAL SOCIETY.

Session of 1817 *and* 1818.

At the annual election of Officers, the following gentlemen were chosen for the ensuing year:

President—Nathaniel Chapman, M. D.

Vice-Presidents— { John S. Dorsey, M. D. / Charles Caldwell, M. D.

Orator—Mordecai Morgan, M. D.

Corresponding Secretaries— { Thomas T. Hewson, M. D. / John Barnes, M. D.

Librarian—Mr. George G. Tress.

Curators— { Mr. George G. Tress, / Mr. James B. Price.

The following gentlemen have been elected Honorary Members of the Society:

Joseph Canby, esq.
Dr. J. Jones, Virginia.
Dr. Field, Virginia.
Dr. I. Rucco, Philadelphia.
Dr. W. Meade, Dublin.
Dr. Orfila, Paris.
Dr. M. Irvine, South Carolina.

The following gentlemen have been elected Junior Members of the Society:

John C. Dalton, Massachusetts.
George M'Clellan, Connecticut.
George C. Trenchard, William Forman, John Y. Clark, Joseph H. Cook, Samuel M. Fisler, Elam V. Mayhew, Leonard Lawrence, Lorenzo T. Fisler, Marmaduke Burroughs, New Jersey.
Dr. G. Uhler, George B. Kirk, James B. Price, Jesse Coates, John H. Gibbon, John Heintzleman, William R. Power, John Francis, Isaac Hays, Charles Redfield, John L. Attle, Stephen Harris, Charles M'Coskey, William Provines, William Steel,

Obadiah M. Dinge, William Rankin, Joseph R. Smith, Jacob Gillam, Benjamin H. Coates, Silas George, Thomas B. Cobean, Pennsylvania.

Thomas Shivers, William Brinkle, Delaware.

Richard Anderson, John R. Purnel, Chissel Purnel, Maryland.

Samuel V. Watkins, William P. Mosely, Hector Harris, William Powel, William D. Coles, John De Graffenried, William Gwathoney, John Patton, James H. Lacy, Theophilus F. Gillam, John Woods, Edward T. Brodnax, Mortimer Williams, William H. Wharton, John Clapper, Charles Beale, Richard H. Ramsey, James J. Royall, Benjamin A. Jones, James W. M. Wallace, Robert M. Withers, Stewart Baldwin, Nathaniel W. Fletcher, David Hobbs, David C. Brown, William A. Sykes, Robert H. Beatty, Edward Curd, Lemuel Yerby, William Bankhead, Charles Urquehart, Richard Chew, Fendall Gregory, Virginia.

Isaac Butler, Thomas M. Gregory, Lewis M. Jiggitts, Solomon Debow, John Allen, North Carolina.

William M. Rivens, James Ramsay, Joseph M. Dill, Samuel Dickson, Thomas Legare, jun. John Gorman, John P. Hill, William Brannan, South Carolina.

Clement A. Finley, Ohio.

John F. Henry, Samuel M. Puckett, Charles H. Warfield, Thomas Davis, David F. Ayres, Kentucky.

William W. Lea, Tennessee.

Thomas G. Janes, Pleasant Cotton, Henry Sackhart, Green B. L. Bush, L. M. Robinson, Georgia.

William Dunbar, John A. Sanderson, Mississippi Territory.

Robert H. Sibley, Louisiana.

JAMES P. FREEMAN, Secretary.

April 10th.